Broadband Internet Access, Telehealth & Child Health: From Differences to Disparities, Part 2

Health Equity

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In part one of this blog post, we explored how COVID-19 public health measures have elevated the importance of broadband internet access for remote education. We argued that what may have once been considered differences in access to high-quality internet have now become disparities. High-quality broadband internet is now not only required for virtual school, but is also necessary for many forms of health care, including pediatric and adolescent care.

In part two of our post, we'll highlight the rise of telemedicine due to COVID-19, early signals for emerging disparities in access to these services and potential steps forward.

Old barriers diminished; new barriers rising?

While telemedicine technology has existed for several decades, issues with liability, reimbursement, and electronic medical record integration hampered the ability of both small practices and large institutions to roll out virtual care offerings on a broad scale. In the context of the COVID-19 pandemic, health care systems have been forced to reimagine their traditional models of health care delivery and lawmakers have removed barriers around payment, allowing telemedicine—which includes live, interactive video visits, store-and-forward modalities (e.g., digital photos for specialist review), and remote patient monitoring—to gain momentum and even replace certain forms of care.

Data from the Centers for Medicare & Medicaid Services (CMS) from the first months of the pandemic showed that patients participated in telemedicine at similar rates across demographic categories, including family income, age, location and race. However, on closer examination of video visits—which require home internet access and a private space for face-to face communication—research teams at Children's Hospital of Philadelphia (CHOP) have discovered early evidence of racial and socioeconomic inequities in adoption among children with neurologic issues and asthma and among adolescents. These findings, which also uncovered lower utilization of video visits among Black and publicly insured patients, are discouraging given older studies suggesting that telemedicine could actually improve access to care.

We currently lack a robust understanding of what is driving differences in use of telemedicine. However, in a city where about 10% of the district's school children were not able to access remote education in the first week

of this school year due to lack of reliable internet, home broadband access is a critical barrier to consider.

Video streaming requirements and potential reasons for gaps in adoption

While nearly all city residents own a smartphone, without reliable home broadband internet, sufficient cell service, and robust data plans, these devices are insufficient to participate in routine video visits, which require fast internet and large volumes of data for video streaming. Low-quality home internet can impact visit length, audio quality, and video quality, which interferes with the ability of patients and providers to communicate.

While it remains to be seen whether lower utilization rates of video visits among Black and publicly insured patients are directly related to longer-standing inequities in broadband internet access observed across our city; differences in patient portal utilization, digital health care literacy, attitudes and preferences toward telemedicine, as well as other hurdles, including the inability for some parents to participate in telemedicine visits during work hours, may also play a role.

Solutions to the problem

The reality of this situation demands greater action to protect children's health, especially in light of the COVID-19 pandemic. Millions of students are unable to access their online learning, mental health disorders are on the rise among adolescents, and routine health care for children is being compromised, as well-child visits are being delayed or simply missed. These experiences underscore the need for collaboration across communities to establish home connectivity for children and families everywhere.

Researchers can help. Prior to the pandemic, a few studies explored the problem of home internet access as a limitation to the delivery of telemedicine and digital health care in general. One 2019 study of a self-management app for Sickle Cell Disease found that more than half of all participants experienced cell service disruptions, which interfered with their ability to regularly access the app and, therefore, benefit from a remote intervention. Similar studies that inquire about access to broadband are needed to understand both the causes and impact of decreased telemedicine utilization during and after this pandemic period. Within health care systems, informatics teams can partner with health services and disparities researchers to investigate the factors contributing to differential uptake of telemedicine and, in turn, help local and state policymakers develop more targeted solutions.

It is then on policymakers to implement programs that are best suited to meet the needs of their local populations while also advocating for change on the national stage. Comprehensive policies could help address broadband availability across the country, including:

- **Expanding of municipal broadband, whereby local governments partially or fully provide internet services.** This approach could provide a cheaper, publicly operated network. However, corporate lobbying, in part, has prevented over half the states in the country from establishing municipal broadband.
- **Increasing private sector initiatives such as Comcast's "Internet Essentials" program.** The program was one of hundreds from service providers that the Federal Communications Commission (FCC) highlighted as part of their "Keep Americans Connected Pledge." While these programs are a step in the right direction, there must be additional scrutiny focused on the speed and quality of internet provided, as many families require support for multiple streaming devices.
- **Extending the COVID-19 Telehealth Program.** This program provided $200 million in funding from the CARES Act to help health care providers create or expand their virtual services. In July, 40 members of Congress signed a letter to continue the program but there has been no further action.

Until high-quality broadband internet is made accessible to all families, pediatricians cannot appropriately address the health and well-being of every child. And while these concerns are not new, the concept of universal internet access takes on greater significance amidst our current landscape, as we work to curb the impact of this pandemic and expand access to care for future generations.