

**The digital divide: How COVID-19's telemedicine expansion could exacerbate disparities**



*To the Editor:* In recent months, closure of nonessential outpatient practices prompted the Centers for Medicare & Medicaid Services to ease regulations on telemedicine. The resultant rapid adoption and investment in telemedicine may normalize telemedicine for the mainstream by increasing patient and physician familiarity and introduce clinical changes that endure after the threat of COVID-19 subsides.

Advancement of teledermatology should intuitively expand access to care, given its convenience, cost effectiveness, and triage capabilities.<sup>1</sup> However, despite increasing access, we must consider how increased telemedicine could paradoxically create or exacerbate health disparities, with early evidence raising concern.<sup>2</sup>

Health disparities in dermatology already exist for minority patients and those with low income; for example, for African American patients, this includes inadequate physician training with skin of color, unequal access, and increased mortality.<sup>3</sup> For direct-to-patient telemedicine, not all patients have equal access. Consider the equipment needed for video visits: smartphones, tablets, or computers and a reliable internet connection. Device ownership and internet use correlate with age, education, and income: 26% of Americans with an annual income of less than \$30,000 rely exclusively on smartphone internet access.<sup>4</sup> Furthermore, US Federal Communications Commission reports confirm significant household income differences between those with and without broadband internet.<sup>5</sup> Although most without internet access live in rural areas, digital infrastructure barriers also affect urban settings: in New York City, almost 50% of low-income households lack internet access.<sup>6</sup> Not only does poor infrastructure limit access, but wealthier consumers' use could drive up costs and crowd out physicians' limited clinical time from the underserved patients who need it most.

Beyond digital access, telehealth services must meet quality standards, and inconsistent quality may burden vulnerable populations more. The American Telemedicine Association's guidelines for teledermatology emphasize the importance of high-quality images, lighting, and positioning, with challenges for evaluating moles (especially in difficult-to-photograph areas, such as hair-bearing skin). As we expand, we must ensure that high quality standards

(including technologic and compliance with the Health Insurance Portability and Accountability Act) remain paramount.

We concede that although we strive to provide excellent care, ensuring internet access for everyone is beyond our reach. Still, as telemedicine is poised to transform the clinical landscape, to encourage health equity, we must advocate for digital equity, and we must anticipate and address disparities before they grow. Solutions may include greater use of store-and-forward telemedicine compared to video visits, which require greater bandwidth; additional clinical appointments for those without proper devices; and nonprofit partnerships to redistribute refurbished devices, as in public education. Beyond devices, physicians should encourage digital literacy as an acquired skill, providing educational training on telemedicine, and consider technical support staff for practices. Further, as Congress considers increased broadband infrastructure in rural areas, we must remind lawmakers that cities also have digital inequities.

Doctors and public health advocates should encourage equitable telemedicine access as it expands now. Dermatology is especially poised to lead the way, given its large body of research and experience. We must anticipate the risks of exacerbating disparities and of delivering less and lower-quality care to our most underserved patients. If we do not, internet access and device ownership could become social determinants of health.

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## REFERENCES

1. Lee J, English JC. Teledermatology: a review and update. *Am J Clin Dermatol*. 2018;19(2):253-260.
2. Eberly LA, Khatana SAM, Nathan AS, et al. Telemedicine outpatient cardiovascular care during the COVID-19 pandemic: bridging or opening the digital divide? *Circulation*. 2020. <https://doi.org/10.1161/CIRCULATIONAHA.120.048185>.
3. Dawes SM, Tsai S, Gittleman H, Barnholtz-Sloan JS, Bordeaux JS. Racial disparities in melanoma survival. *J Am Acad Dermatol*. 2016;75(5):983-991.
4. Anderson M, Kumar M. Digital divide persists even as lower-income Americans make gains in tech adoption. Pew Research Center. Available at: <https://www.pewresearch.org/fact-tank/2019/05/07/digital-divide-persists-even-as-lower-income-americans-make-gains-in-tech-adoption/>; 2019. Accessed May 28, 2020.
5. Federal Communications Commission 2020 Broadband Deployment Report. Available at: <https://docs.fcc.gov/public/attachments/FCC-20-50A1.pdf>; 2020. Accessed May 28, 2020.
6. City of New York. De Blasio Administration Releases Internet Master Plan For City's Broadband Future. Available at: <https://www1.nyc.gov/office-of-the-mayor/news/010-20/de-blasio-administration-releases-internet-master-plan-city-s-broadband-future>; 2020.

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