TELEHEALTH

Tim O’Shea*

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I. WHAT IS TELEHEALTH?

Telehealth is the remote delivery of health care to a patient through technology.1 While this concept may seem simple, it encompasses many categories of services, including remote doctor’s visits and patient counseling, the electronic transmission of treatment information, remote patient monitoring, and mobile applications designed to assist patients in their treatment.2 Telemedicine also includes healthcare infrastructure, such as the improvement and spread of electronic health records and the use of digital

* Georgetown University Law Center, J.D. 2022; George Mason University, B.A. 2019, Government and International Politics.
1 Rita M. Marcoux & F. Randy Vogenberg, Telehealth: Applications from a Legal and Regulatory Perspective, 41(9) HEALTH CARE AND L. 567, 567 (2016), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5010268/ [https://perma.cc/4R95-S9FD]. In December 1998 in Geneva, Dr. Fernando Antezana, Director General of the WHO, specified the following definitions of telehealth and telemedicine: “If telehealth is understood to mean the integration of telecommunications systems into the practice of protecting and promoting health, while telemedicine is the incorporation of these systems into curative medicine, then it must be acknowledged that telehealth corresponds more closely to the international activities of WHO in the field of public health. It covers education for health, public and community health, health systems development and epidemiology, whereas telemedicine is oriented more towards the clinical aspects.” Stefan Håkansson, What Do We Really Know About the Cost-Effectiveness of telemedicine? REPORT TO TELEPLANS PROJECT http://www.ingbiomedica.unina.it/teleplans_doc/cost_effectiv_TM.html (last visited May 2, 2022) [https://perma.cc/HW5Y-U645].
2 Marcoux & Vogenberg supra note 1.
prescriptions. These methods can often synergize with traditional forms of medicine to lower costs and improve treatment for patients. For example, for the 25 percent of Americans with multiple chronic conditions, who often require frequent checkups and monitoring by doctors, remote patient counseling can reduce the burdens of frequent contact with doctors by interspersing in-person visits with remote ones. While telemedicine therefore encompasses many categories of healthcare, it generally involves using technology to lower barriers to access and streamline the provision of healthcare.

Telehealth is particularly important because it exists at the intersection of two of the largest economic sectors in the United States: technology and healthcare. U.S. patients spent $3.65 trillion on healthcare in 2018. By 2027, healthcare spending by Medicare, Medicaid, and private insurance is expected to grow by 7.4 percent, 5.5 percent, and 4.8 percent, respectively. The home care industry, which serves patients who often require frequent medical checkups and monitoring, is a $96.9 billion market. The U.S. market for wearable technology, which is increasingly finding applications in telemedicine, stands at $32.6 billion in 2019 and is projected to grow by 15.9 percent per year through 2027. Telehealth will likely only increase in scope and depth as the amount of money invested in these sectors continues to grow.

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But the benefits of telehealth are not limited to companies seeking a slice of the market. Because telehealth allows for faster and more convenient access to care and reduces secondary costs such as travel or childcare, 93 percent of surveyed consumers who used telehealth reported that it lowered their healthcare costs.\(^9\) Telehealth also provides easier access to healthcare for individuals with reduced mobility, such as older adults and people with disabilities.\(^10\)

II. **Evolution of Telehealth**

The growth of telehealth was exceeding projections even before the COVID-19 pandemic. In 2015, the global telehealth market was predicted to grow to $28.9 billion by 2019.\(^11\) Instead, the market reached $41.4 billion by 2019.\(^12\) The pandemic has only accelerated this trend, creating an estimated 64.3 percent year-over-year increase in market size, with up to a seven-fold increase overall by 2025.\(^13\) Besides the increase in demand spurred by stay-at-home orders and other pandemic-related changes in consumer behavior, this growth has been driven by three main factors: (1) an increase in employer coverage; (2) expanding use cases for telehealth; and (3) regulatory changes that have allowed more consumers to utilize telehealth.


percent. In 2013, multiple Fortune 500 companies began offering employees with type 2 diabetes the use of BlueStar, a physician-prescribed mobile application that allows individuals to upload data and receive advice and assistance with their diabetes management plan. Given that nearly half of the United States receives health insurance through their employer, this represents a sea change in the availability of telehealth to U.S. consumers. The return for companies is clear: healthier employees are more productive and less likely to incur high insurance costs or require time off from work. Meanwhile, employees gain access to telehealth tools and treatments.

Second, this growth has also been fueled by the expanding possible use cases for telehealth. In the last twenty years, the most common telehealth delivery method by far was video appointments. From 2005 to 2017, the number of telehealth appointments grew by 52 percent per year, with the majority of services being either mental health appointments or primary care visits. However, innovative technologies have begun to expand the possible uses for telehealth. In 2017, the Food and Drug Administration (FDA) issued approval for the prescription of Reset, a mobile application that provides remote cognitive behavioral therapy to patients recovering from substance abuse disorders. Also in 2017, the FDA issued limited approval for MyCite, a first-of-its-kind pill that, once taken, transmits a signal to a patch on a patient’s arm and then to a mobile application that tracks whether that patient

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is following a correct dosage schedule for their other medications. Remote patient monitoring alone has the potential to save $197 billion in healthcare costs over twenty-five years by reducing the costs of care for chronic conditions such as congestive heart failure, diabetes, chronic obstruction pulmonary disease, and chronic skin ulcers. For prenatal and neonatal care, research suggests that the use of remote counseling and monitoring interspersed with physical visits can provide similar care and health outcomes for families while offering strong opportunities for contact with specialists and detection of postpartum depression. Telehealth is also increasingly used for follow-up components of physical medical care. Veterans Affairs doctors have begun using remote follow-up appointments after urological testing to counsel patients on kidney stones and prostate cancer surveillance. Therefore, while telehealth has not entirely displaced traditional contact with doctors, it is increasingly being combined with traditional care to lower costs for patients while maintaining strong health outcomes.

Third and finally, regulatory change has also contributed to the increased use of telehealth. The growth in telehealth access through Medicare illustrates this trend. In 2019, Medicare recipients were able to use their coverage for brief virtual check-ins with their healthcare providers, and this coverage was expanded in March 2020 to include 135 additional telehealth services, doubling the number of telehealth services previously available to patients. As of October 2020, twenty-three states had also enacted legislation or executive orders that codified or extended Medicaid coverage for telehealth.

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20 Litan, supra note 3, at 2.


percent and 19.8 percent of the U.S. population, respectively. These changes have therefore unlocked new demand for telehealth and may remove barriers to health services for individuals who might otherwise postpone or forego medical care due to high costs.

III. AREAS OF CONCERN FOR TELEHEALTH

A. Privacy

Telehealth has significant privacy concerns because of the transfer of sensitive information involved in many telehealth tools. In the throes of the pandemic, regulatory authorities sought to facilitate telehealth by reducing the regulatory burden surrounding privacy. The HHS Office for Civil Rights (OCR) announced in March 2020 that it would not impose Health Insurance Portability and Accountability Act (HIPAA) penalties on providers who, in good faith, used video conferencing tools such as Zoom, Google Hangouts, or Skype to conduct meetings with patients. However, continued usage of insecure platforms or other transmissions of patient data may require more solid rules about secure communications and due diligence, especially for providers with concerns over HIPAA compliance issues. Deferred enforcement serves as a stopgap solution, but providers require guidance on how to comply with HIPAA in their telehealth offerings. Cybersecurity issues around patient data may also require further investment by healthcare providers. On average, 6 percent of healthcare provider information technology budgets are allocated for cybersecurity, compared with 16 percent for the federal government and 12 percent to 15 percent for financial institutions. Investment in the security required of expanded online medicine may therefore impose new costs on healthcare providers.


25 KAISER FAM. FOUND., supra note 16.


29 Beth Kutscher, Healthcare Underspends on Cybersecurity as Attacks Accelerate, MODERN HEALTHCARE (Mar. 3, 2016),
B. Rural Access

Theoretically, telehealth has the potential to improve healthcare access for traditionally underserved populations, such as those in rural markets.\(^{30}\) Nearly 60 percent of the regions that suffer from shortages of medical professionals are in rural areas.\(^{31}\) Rural hospitals are also less likely to host specialists because their smaller patient population cannot justify the cost.\(^{32}\) However, the poor broadband infrastructure in rural areas has constrained the ability of consumers to take full advantage of telehealth options.\(^{33}\) For instance, in April 2020, while more than 45 percent of Medicare primary care visits in urban counties occurred remotely, in rural counties, only 25 percent were remote.\(^{34}\) One reason for this inequality is that telehealth often requires telehealth broadband internet access lacking in many rural areas.\(^{35}\) In counties in the most rural classification, which contain less than ten residents per square mile, only 59.9 percent of inhabitants have access to broadband internet.\(^{36}\) To achieve the potential of telehealth in rural areas, there needs to be commensurate improvements in access to broadband networks.

C. Barriers to Adoption

Even after the onset of the COVID-19 pandemic, healthcare providers seeking to deploy or expand telehealth offerings still encounter challenges. To practice telehealth, both healthcare providers and patients require strong access to the internet and other information technology, such as video conferencing capabilities.\(^{37}\) Other barriers are regulatory. For instance, state laws limiting the practice of medicine only to doctors licensed in that state have prevented telehealth providers from delivering out-of-state telehealth

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\(^{30}\) Litan, supra note 3, at 13.


\(^{32}\) Litan, supra note 3, at 13.

\(^{33}\) Coleman Drake et al., The Limitations of Poor Broadband Internet Access for Telemedicine Use in Rural America: An Observational Study, 171 ANNALS INTERNAL MED. 382 (2019).


\(^{35}\) Drake, supra note 33.

\(^{36}\) Id.

\(^{37}\) Litan, supra note 3, at 18.
services to consumers, limiting competition in underserved markets. As of October 2020, while all fifty states have Medicaid rules that cover some form of video-based appointment, only ten states have Medicaid rules that also cover both store-and-forward services and remote patient monitoring. A larger issue that limits widespread use of telehealth is payment parity, which concerns the extent to which comparable in-person and telehealth services are reimbursed at the same rate. As of July 2020, only 32 percent of private insurance individual market customers and 25 percent of group market customers have a plan that pays providers equally for in-person services and telehealth; only 27 percent of individual market customers and 22 percent of group market customers live in states that require that parity. Payment rates are a limiting factor on the growth of telehealth because, without the same marginal returns associated with telehealth as compared to in-person services, healthcare providers may not consider telehealth profitable enough to pursue. The American Medical Association has already begun engagement with the National Governors Association and the National Association of Insurance Commissioners to address persisting regulatory barriers such as a lack of coverage parity between in-person and telehealth services and geographic limitations on telehealth services.

Technology access and regulatory uncertainty are intertwined issues when it comes to the growth of telehealth. Some doctors are unwilling to make long-term investments in telehealth-related technology because regulatory changes have so far been only temporary.

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IV. FUTURE OF TELEHEALTH

The future capabilities of telehealth will only grow as technology itself evolves. Remote counseling has already been used to help patients complete and comprehend at-home genetic testing, a tool that has the potential to give doctors the data necessary to predict health risks in patients and better target preventative care measures.43 Some experts suggest that the advancement and proliferation of robotics will allow for remote surgeries, allowing specialized surgeons to conduct operations at any location that they can connect with.44 Just before the start of the COVID-19 pandemic, the FDA issued authorization for the first artificial intelligence (AI) enabled cardiac ultrasound software.45 As AI continues to evolve and interpret patient data into actionable judgments, the connections between medicine and technology will likely only deepen.

Regulatory authorities have also begun to look to the future, especially regarding whether the pandemic-based changes to telehealth regulations should be made permanent. The Centers for Medicare and Medicaid Services (CMS) Administrator announced in July 2020 that the office would be studying the impact of the temporary telehealth rule changes and “assessing which of these flexibilities should be made permanent through regulatory action,” before declaring that “rapid adoption of telehealth among providers and patients has shown that telehealth is here to stay.”46 The American Psychiatric Association further called for not only the permanent extension of pandemic-related regulatory changes, but also the removal of frequency limitations on telehealth services and permission for providers to prescribe medication without an in-person visit.47 Similar changes remain on the table at the state level. Many states with Medicaid rules covering telehealth still restrict the service type and provider for remote appointments and store-and-

44 Litan, supra note 3, at 18.
46 Verma, supra note 23.
forward services, as well as the eligibility of providers and devices for remote patient monitoring.\textsuperscript{48}

The future development of telehealth will not occur in a vacuum. Changes in healthcare demand, technological developments, broadband connectivity, federal and state regulations, and privacy considerations will all determine the extent to which telehealth usage continues to grow. Should these factors continue to support its development, telehealth will likely become a key component of American healthcare.

\textsuperscript{48} CTR. FOR CONNECTED HEALTH POL’Y, supra note 37, at 7–8.