

Valuation of Telemedicine: Introduction

Telemedicine has rapidly advanced over the past couple of decades, and its advancement has been significantly accelerated since the COVID-19 pandemic struck the U.S. These virtual services have the potential to allow greater access to, and quality of, care, while also resulting in significant cost savings. However, the technology also has numerous challenges, such as infrastructure gaps, capital requirements, and knowledge barriers among patients. The first installment in this five-part series on the valuation of telemedicine provides a description of telemedicine, an overview of its role during the COVID-19 *public health emergency* (PHE), and the potential challenges and opportunities it may face in the future.

Defining Telemedicine and Telehealth

The *National Institutes of Health* (NIH) broadly defines telehealth as the “*use of communications technologies to provide health care at a distance.*”¹ Telehealth can be used to describe the monitoring of medical devices; health status data collection and analysis via smart devices; or, virtual visits between physicians and patients.² The *World Health Organization* (WHO) defines telemedicine as “*the delivery of health care services, where distance is a critical factor...using information and communication technologies...for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers.*”³

The terms “*telehealth*” and “*telemedicine*” are distinguished by some in the healthcare industry, including the WHO, which differentiates *telemedicine*, which only includes services administered by physicians, from *telehealth*, which describes services administered by nurses, pharmacists, or other healthcare professionals.⁴ In contrast, the *American Telemedicine Association* (ATA) considers terms to be synonymous and largely interchangeable.⁵ For the purposes of this series, the terms will be considered to be synonymous, with the term “*telemedicine*” used for the sake of consistency.

The three main forms of telemedicine include:

- (1) *Store-and-Forward* or “*asynchronous*” telemedicine, where information such as medical histories, reports, or other data are sent to a specialist for diagnosis and treatment;
- (2) *Remote patient monitoring*, where a patient’s clinical status is evaluated continuously through video monitoring, images, or remotely reviewing tests; and,
- (3) *Real-time* or “*synchronous*” telemedicine, which consists of a live conversation between the patient and provider.⁶

The Rise of Telemedicine

Although utilization of telemedicine technology has been relatively low historically, provider use of telemedicine services has grown considerably in recent years as the technology becomes more readily available and affordable.⁷ Advancements in telemedicine technology and its infrastructure have allowed otherwise unserved or underserved patients to receive healthcare services. Payors and providers (including physician practices and hospitals) alike have been adopting telemedicine technologies at a rapid pace in an attempt to reduce avoidable hospitalizations, improve in-facility care, and decrease costs.⁸ As healthcare reimbursement has continued to shift from *volume-based* to *value-based*, healthcare providers have increasingly looked to telemedicine to expand their services and better support patients before and after their visit.⁹ Telemedicine can also be a more appealing option for patients who face difficulty accessing care or leaving their residence. This technology means that healthcare services can be delivered either at a closer facility or in the comfort of the patient’s home.¹⁰ While telemedicine utilization has been on the rise over the past decade, it was not until the 2020 COVID-19 PHE that the technology became widely adopted and utilized by a variety of patients and providers.

Telemedicine and the COVID-19 PHE

Since the beginning of the COVID-19 PHE in March 2020, all states and medical specialties have seen unprecedented increases in telemedicine utilization.¹¹ Several policies and developments have jump-started this rapid expansion. Following the declaration of COVID-19 as a PHE, the *Centers for Medicare and Medicaid*

Services (CMS) announced a number of relaxations and flexibilities for telemedicine reimbursement and coverage. This emergency declaration allowed beneficiaries to receive care wherever they were located – even from out-of-state providers – and did not penalize providers who, while acting in good faith, violated the *Health Insurance Portability and Accountability Act* (HIPAA) by using unencrypted video programs such as Skype or FaceTime to conduct telemedicine visits.¹² These measures represented dramatic changes from the previous policies, which only covered telemedicine for rural patients and had stringent restrictions on the originating site for the care and only allowed physicians to care for established patients in the same state in which they were licensed.

In addition to relaxing the originating site requirements, CMS also expanded the number of services that could be provided through telemedicine. An additional 135 services, including emergency department visits, were added to the list of covered (and thus reimbursable) services for Medicare beneficiaries.¹³ While all of these flexibilities and expansions were originally only valid for the length of the PHE, CMS has been looking to extend some expansions in covered services and reimbursement semi-permanently or permanently. For example, CMS's 2021 *Medicare Physician Fee Schedule* (MPFS) proposed rule included expansions to reimbursement for telemedicine services.¹⁴ This proposed rule suggested permanently implementing or temporarily expanding coverage for several telemedicine services.¹⁵ Services such as *evaluation and management* (E/M) and some visits for patients with cognitive impairment were proposed to be permanently covered for telemedicine.¹⁶ CMS also proposed continued reimbursement for some telemedicine services, such as emergency department visits, only temporarily, until the end of the calendar year when the COVID-19 PHE officially ends.¹⁷ Under this proposed rule, nine telemedicine service codes would remain covered permanently under this proposed rule, 13 would remain covered temporarily, and 74 would be removed immediately after the PHE ends.¹⁸

Rural providers, as evidenced by their lower rates of telemedicine usage, have not been able to take advantage of the opportunities provided by telemedicine to the same extent as urban providers.¹⁹ However, an executive order released by President Trump on August 3, 2020, calls for dramatic functional and reimbursement changes for these rural providers specifically.²⁰ The executive order also directs CMS to review the 135 services that it originally waived on a temporary basis in March 2020, and orders certain services to be permanently delivered via telemedicine technology going forward, although the specific codes have not yet been decided.²¹

Future Challenges to Implementation

Telemedicine's significant potential to increase quality and access to care and its exponentially-expanded

popularity during the COVID-19 PHE is countered by a few major barriers experienced by providers seeking to implement and expand telemedicine into their practice. One of the greatest challenges for telemedicine is the limited reimbursement for its services. High upfront technology, administration, and set-up costs, without the guarantee of permanent reimbursement (comparable to in-person services), may deter some (and particularly small) providers. In fact, larger organizations of 100 or more clinicians were able to shift an average of 16% of their pre-pandemic visits to telemedicine, compared to only about 8% for smaller organizations.²² From the abrupt spike in use through March and April 2020, volume has apparently begun decreasing, with the volume of telemedicine visits during the week of June 14, 2020 nearly a third less than in early April.²³ Additionally, there is a lack of integration and interoperability among healthcare organizations' various *electronic health record* (EHR) systems, which platforms also may not coordinate with the telemedicine platform. These issues facing the telemedicine industry may result in the provision of costly and inefficient care, and many providers seem to be weary of fully adopting the technology without plans in place for long-term viability.

Patient satisfaction with telemedicine services seems to be high, but research also indicates that certain patient populations may not be able to take full advantage of these virtual visits. On one hand, those who have been able to utilize telemedicine and virtual visits seem to be satisfied, with one survey indicating that 96% of patients found arranging virtual visits to be either extremely or somewhat easy, and 96% were satisfied with the virtual care they received (with 77% being completely or very satisfied).²⁴ Importantly, 86% of the surveyed patients were likely to recommend virtual care to others.²⁵ Another survey found that 83% of patients were likely to use telemedicine after the COVID-19 PHE.²⁶ Other studies examining the ease of telemedicine use for older adults indicate less promising statistics. An August 2020 study found that, across more than 4,500 adults aged 65 or older, over 70% showed signs of unreadiness, including difficulty hearing or communicating or inexperience with the technology required.²⁷ Another study, using pre-COVID-19 data, similarly showed that older age was strongly associated with lower telemedicine utilization.²⁸ Because these older adults comprise approximately 25% of all physician office visits, their inability (and unwillingness) to utilize telemedicine could slow the technology's adoption rate in the near future.²⁹ However, the quick expansion of telemedicine over the past few years, even before COVID-19, indicates that this technology will continue to expand as usage and adoption rates by physicians and patients alike increase in the future. One way to accomplish this, it seems, is through expanded reimbursement past the COVID-19 PHE. The second installment of this five-part series will cover the past, current, and future state of telemedicine reimbursement.

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