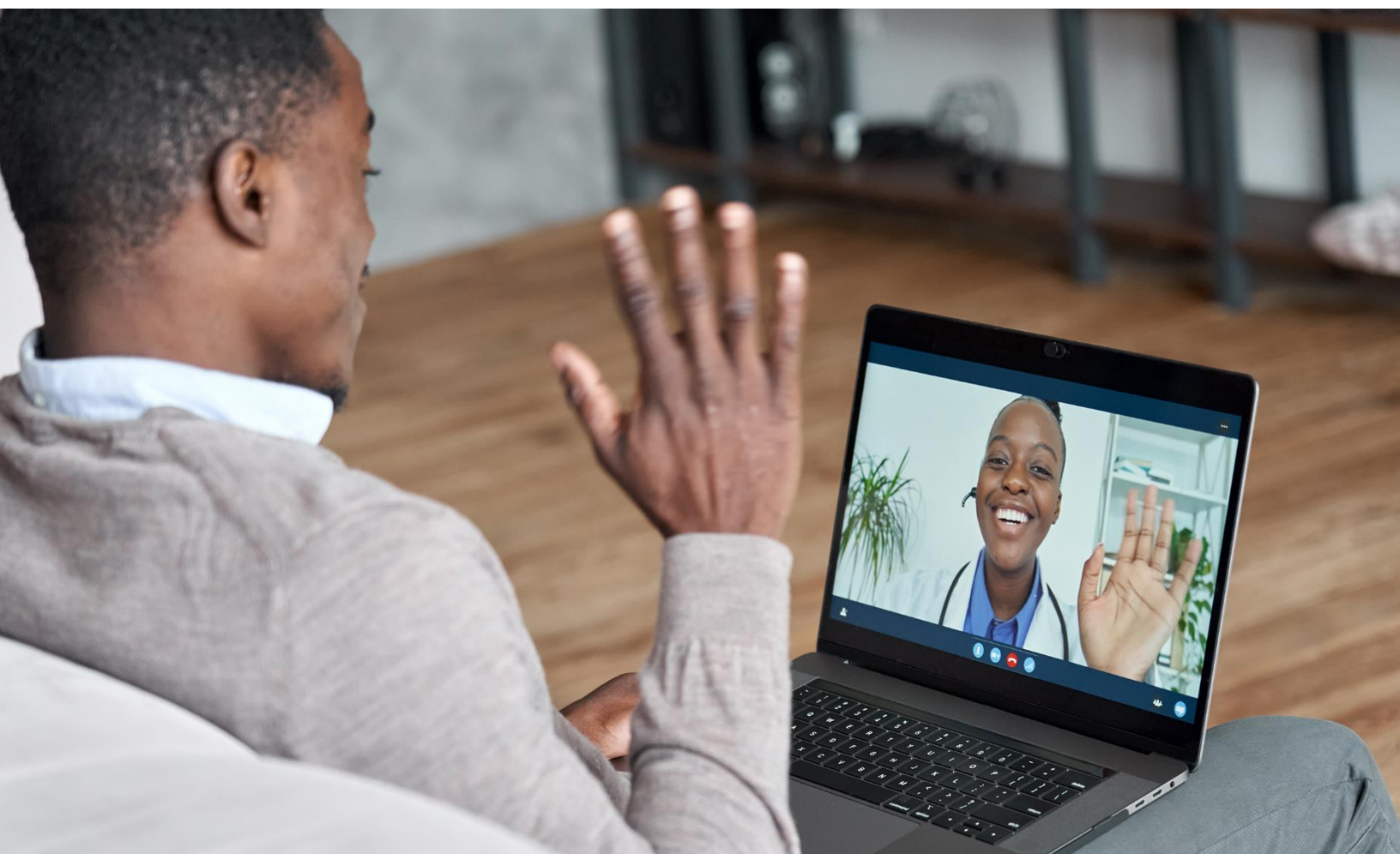


# Changes to Telehealth Policy, Delivery, and Outcomes in Response to COVID-19

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# Introduction

## Background and Purpose

The COVID-19 pandemic has necessitated a shift in healthcare delivery, and it has resulted in stakeholders rapidly deploying and increasing their reliance on telehealth as a safer alternative to in-person care. Temporary regulatory changes have been made to facilitate the expanded use of telehealth services for healthcare delivery and have temporarily adjusted payments for telehealth services. It is unclear the degree to which these shifts may have longer-term implications for care delivery; however, they do change the priorities for research, highlighting the need to expand the evidence base for telehealth.<sup>1</sup>

The landscape review provides a rapid assessment of the published and grey literature on changes to telehealth-related policy, care delivery, and outcomes as a consequence of the COVID-19 pandemic. In this review, we identify new areas where policy changes have enabled the use of telehealth, discuss findings that shed light on new patterns of healthcare delivery, and investigate the consequences for patients in terms of health equity and disparities with the goal of identifying areas that may warrant future research. We also provide current evidence on the extent to which changes in the regulatory landscape and in healthcare delivery may persist beyond the pandemic, as these changes may also influence PCORI's strategic investments in telehealth.

## Report Scope

This report covers the current, and continuously evolving, landscape of telehealth

usage under COVID-19. One of the potential benefits of telehealth is that it can expand healthcare access,<sup>2 3 4</sup> while addressing longstanding barriers and health disparities.<sup>5 6 7</sup> Telehealth has played a role in healthcare delivery prior to the pandemic, specifically for behavioral health and in serving rural populations with medical provider shortages. During the pandemic, it has proven to be vital a mechanism for delivering healthcare when in-person services are not necessary for providing care, and/or are too risky for both patients and providers.

With the spread of COVID-19, the need for rapid deployment of telehealth became apparent. Congress passed the Coronavirus Preparedness and Response Supplemental Appropriations Act authorizing reimbursement parity for telehealth services. The Act also waived geographic limitations so that providers could maintain continuity of care during stay-at-home or quarantine orders designed to limit virus exposure.<sup>8</sup> Healthcare providers were obliged to switch rapidly to virtual visits, and did so using a variety of solutions with different implementation considerations and challenges. For example, some worked with their electronic health record (EHR) vendors to expand services, or deployed custom mobile applications and consumer software, while others have relied on audio-only, audio-visual solutions and/or text messages to maintain contact with patients. The net result was a dramatic increase in the use of telehealth within weeks.<sup>9 10 11</sup>

Telehealth is broad term for supportive technologies and services—both clinical and

non-clinical—that facilitate remote care and communication. It can include clinical interactions between patients and a range of providers who support their health and are not necessarily physicians (e.g., physical and occupational therapists, nutritionists); it can cover non-clinical interactions such as administrative meetings, medical education, or provider trainings. Telehealth includes a growing variety of applications and bidirectional services using two-way video, smart phones, wireless tools, and other forms of telecommunications technology. Telemedicine, on the other hand, is a narrower term that is sometimes used interchangeably with telehealth. It usually refers to a subset of health-related services and communication tools that physicians or other medical practitioners can use to deliver remote clinical care.<sup>12 13</sup> There are also specific terms used to

describe specialty services and use of telehealth in particular settings, such as tele-ICU and telemental health. For the purposes of this report, we use the more inclusive term ‘telehealth’ unless we are citing a source that uses ‘telemedicine’ or another specific term.

As of August 2020, PCORI had invested nearly \$400 million in more than 90 telehealth comparative clinical effectiveness research (CER) studies to expand the evidence base for ways in which telehealth can be used to deliver clinically effective, patient-centered care. PCORI also funded approximately \$5 million in dissemination and implementation (D&I) projects related to telehealth, intended not only to generate best practices and CER, but to support dissemination and adoption of best practices in the field.<sup>14 15</sup>

## PCORI’s Investment in Telehealth Research under COVID-19

- **Understanding the State of Evidence for Virtual Video Visits:** This project involves a rapid review of evidence comparing video-teleconferencing versus face-to-face encounters for disease prevention, diagnosis, and treatment between patients and physicians—an area where the use of telehealth expanded dramatically under COVID-19.
- **COVID-19 Targeted PCORI Funding Announcement (tPFA):** The tPFA offered funding on an accelerated timeline to strengthen PCORI’s understanding of approaches to mitigate the effects of COVID-19, and to inform planning and decision-making in the wake of the pandemic.<sup>16</sup> Five of nine funded projects focus on some aspect of telehealth. They include: examining effective models of telehealth in primary care and targeting patients with chronic disease;<sup>17</sup> evaluating the effectiveness of automated remote monitoring for COVID-19;<sup>18</sup> a randomized controlled trial of infection control best practices in nursing homes;<sup>19</sup> a randomized control trial to compare effectiveness of teleconference mindfulness-based stress reduction (MBSR) versus an MBSR mobile app;<sup>20</sup> and an impact study on the effect of COVID-19-related policy changes on the treatment of opioid use disorders.<sup>21</sup>
- **Enhancements to PCORI projects under COVID-19:** PCORI provided modest funds to ongoing studies to leverage their existing expertise and infrastructure to address an important issue faced under the COVID-19 pandemic. For example, one study is evaluating whether existing access to telemental health services can reduce COVID-related anxiety and depression.<sup>22</sup>
- **Adaptations to PCORI projects under COVID-19:** The pandemic meant that some studies had to alter their original designs. For example, certain face-to-face interventions converted to virtual interactions. These adaptations will provide an opportunity to learn about the effectiveness of expanded or emerging uses for telehealth.

# Methods

The landscape review was guided by a set of questions designed to address three major components: policy context, health system delivery, and outcomes. These components are adapted from the Edmunds (2017) research and policy framework for telehealth developed by a multidisciplinary group of experts from AcademyHealth, the American Telemedicine Association (ATA), Kaiser Permanente Institute for Health Policy, and the Physician Insurers Association of America (PIAA).<sup>23</sup>

## Research Questions

Component	Topic and Guiding Questions
<b>Policy Context</b>	<b>Regulatory and reimbursement policy changes resulting from COVID-19</b> <ul style="list-style-type: none"><li>• How have telehealth reimbursement policies changed in response to COVID-19 across Medicare, Medicaid, and commercial payers?</li><li>• How does reimbursement for telehealth visits compare to in-person visits?</li><li>• How have policies governing telehealth and physician licensure changed in response to COVID-19?</li><li>• How do these policies apply to different settings, services, practitioners, and modalities, and geographies?</li><li>• What recommendations have been made in regard to post-pandemic telehealth reimbursement policies and regulations?</li></ul>
<b>Health System Delivery</b>	<b>Uses of telehealth during COVID-19</b> <ul style="list-style-type: none"><li>• What novel uses of telehealth have emerged in response to the pandemic? What services or modalities of telehealth have seen the greatest expansion/uptake?</li><li>• How are healthcare organizations deploying pre-existing telehealth capabilities?</li><li>• How do trends in telehealth use vary by population, setting, geography (rural vs. urban), provider type, etc.?</li><li>• What are the most common barriers faced by providers as they expand telehealth use? What challenges remain?</li></ul>
<b>Outcomes</b>	<b>Anticipated use of telehealth post-pandemic</b> <ul style="list-style-type: none"><li>• What has been the patient experience with regard to telehealth under the pandemic?</li><li>• What unintended consequences have resulted from the rapid uptake of telehealth?</li><li>• Do established best practices and standards of care exist for common telehealth practices?</li><li>• To what extent do new practices align with established best practices and standards of care?</li><li>• To what extent has expanded use of telehealth ameliorated and/or exacerbated health disparities for vulnerable groups? What telehealth technologies, policies, or practices can help mitigate these disparities?</li><li>• What opportunities exist for telehealth to enhance patient-centered care and health equity?</li></ul>



## Process and Search Strategy

With our research questions as a guide, we conducted pragmatic literature searches of the three major components—policy context, health system delivery, and outcomes. We focused on grey literature published since January 31, 2020, including key resources provided by PCORI, NORC’s team, and a member of our technical expert panel (TEP).

We developed search terms to use across the published and grey literature (see [Appendix A, Exhibit A-1](#)) and inclusion/exclusion criteria (see [Appendix A, Exhibit A-2](#)). For published literature, we searched PubMed and the National Library of Medicine’s LitCovid hub. For the grey literature, we included white papers, reports, news articles, and industry communications culled from Google, the Health Affairs Blog, professional organization websites (e.g., American Medical Association, National Rural Health Association, ATA), research and policy organizations (e.g., Center for Connected Health Policy, University of Pennsylvania Leonard Davis Institute of Health Economics), and government websites.

In addition, NORC recently conducted a search of telehealth payment and policy landscape changes that occurred under COVID-19 from the beginning of the pandemic through July 31, 2020. This effort was requested by the Office of the Assistant Secretary for Planning and Evaluation (ASPE) to assist the Physician-Focused Payment Model Technical Advisory Committee (PTAC) in discussions of the payment and regulatory environment. We have leveraged the policy-related findings and annotated bibliography of that work,<sup>24</sup> and have conducted supplemental searches to capture policy-related literature that has been released in the past 3 months. Searches related to delivery and use, challenges, and outcomes covered the period from February 1 to October 16, 2020.

Below, we present the results of our searches, organized by component: 1) policy and payment landscape changes, 2) health system delivery changes, 3) outcomes (focused on patient experience and disparities).



# Policy and Payment Landscape Changes

Following the declaration of a national public health emergency under COVID-19, a series of temporary policy changes were instituted at the federal and state levels, which resulted in further changes specific to the Centers for Medicare & Medicaid Services (CMS) and commercial payers. These policy changes were designed to increase the flexibility of providers to offer reimbursable telehealth services by overcoming pre-pandemic restrictions in three areas: regulatory, payment, and benefit design.

## Federal Guidance

The White House declared a public health emergency on January 31, 2020, under section 319 of the Public Health Service Act (42 U.S.C. 247d), authorizing the Secretary of Health and Human Services (HHS) to waive or modify requirements for Medicare, Medicaid, the Children's Health Insurance Program (CHIP) related to healthcare delivery and HIPAA.<sup>25</sup> This action was followed, in March 2020, by the Coronavirus Preparedness and Response Supplemental Appropriations Act.<sup>26</sup> Together, these actions enabled CMS to expand access to telehealth services across the country by waiving Medicare restrictions on telehealth including changes to:

- Geographic requirements that previously limited telehealth to beneficiaries living in rural areas.
- The originating site requirement, allowing patients to access telehealth services from their homes.
- Revising device type requirements to allow telehealth visits to be delivered via patients' smartphones.
- Changing patient and service eligibility requirements, including eliminating requirements for a preexisting relationship between patient and provider.
- Allowing Federally Qualified Health Centers (FQHCs) and rural health clinics (RHCs) to serve as "distant site" providers of telehealth to Medicare beneficiaries. Previously, an FQHC or RHC could not bill for services provided to a patient who was not physically present at the facility.
- The list of qualified providers was not waived and remains in effect.

On March 30, 2020, the Office of Civil Rights (OCR) issued additional telehealth guidance to providers that extended leniency around the use of video conferencing apps that had previously not been allowable under the Health Insurance Portability and Accountability Act (HIPAA) due to patient privacy concerns. OCR advised that it would not impose penalties for HIPAA violations related to good faith efforts to provide healthcare treatment via non-public facing remote communications technologies (e.g., Skype, Facetime, Zoom) during the pandemic; however, public facing platforms (e.g., Facebook Live, Twitch, TikTok) remained prohibited.<sup>27</sup>

There have been numerous other federal

actions taken to guide and expand the use of telehealth for different populations and settings including: removing geographic restrictions for evaluation and management services and for frontier states,<sup>28 29</sup> removing geographic restrictions for mental health, emergency medical care services, FQHCs and RHCs,<sup>30 31 32</sup> establishing payment parity for rural sites,<sup>33</sup> allowing telehealth treatment and flexibility in offering patients Medication Assisted Therapies (MAT) and other necessary drugs without a prior in-person visit,<sup>34</sup> allowing first dollar spending on telehealth from high deductible health plans,<sup>35</sup> and amending the Public Health Services Act to evaluate reimbursement mechanisms, infrastructure, and workforce capacity for telehealth.<sup>36</sup> Recent legislation was introduced in the House of Representatives offering guidance and strategies for delivering telehealth to Medicaid and CHIP populations.<sup>37</sup>

[Appendix B, Exhibit B-1](#) provides a summary of the key policy provisions that have supported telehealth expansion, and considerations for

their possible extension beyond the pandemic—including a full list of federal actions provided in [Appendix B, Exhibit B-2](#). On October 2, 2020, the HHS Secretary officially renewed the public health emergency determination, which was set to expire on October 22, 2020. The renewal extends temporary changes associated with telehealth related to the pandemic for another 90 days from October 23 to January 21, 2020.<sup>38</sup>

## CMS Policy Changes

The declaration of a public health emergency authorized CMS to address key health system needs through Section 1135 waivers, making changes to payment and reimbursement policies to enable providers to deliver patient care via telemedicine. Exhibit 1 displays the specific changes made to telehealth coverage and reimbursement under Medicare fee for service (FFS) plans that were summarized above and appear below in greater detail.<sup>39</sup>

**Exhibit 1. Telehealth Coverage under Medicare FFS**

Topic	Coverage Prior to March 2020	Temporary Coverage Response to COVID-19 (through the end of the public health emergency)
<b>Location of Patient</b>	Patient must be at an originating site that is a rural medical facility, a facility in a county located outside of a MSA, or a facility located in a health professional shortage area (HPSA) in a rural Census tract as defined the Health Resources and Services Administration (HRSA), community mental health centers, a patient's home (in rural or urban area) in the case of an end-stage renal disease (ESRD) diagnosis or co-occurring substance abuse and mental health disorder diagnoses, a renal dialysis facility, acute stroke services center in hospitals, critical access hospitals, or mobile stroke units in any geographic region. <sup>40 41 42 43</sup>	No geographic requirements that restricts coverage to rural locations or HPSAs. No restrictions on settings for the patient (providing services to patient at home is covered). <sup>44 45</sup>

Topic	Coverage Prior to March 2020	Temporary Coverage Response to COVID-19 (through the end of the public health emergency)
<b>Location of Provider</b>	Provider must be at the facility listed as the point of service, known as the distant site. FQHCs and RHCs may bill as the originating site for telehealth services, but not as distant sites. <sup>46</sup>	No geographic restrictions, allows providers to provide services from their home. <sup>47</sup> FQHCs and RHCs with telehealth capabilities may now serve as distant sites for telehealth services. <sup>48</sup>
<b>Services</b>	Approximately 100 codes available for telehealth services. <sup>49</sup>	CMS added approximately 80 new services under the March 31st COVID-19 Interim Final Rule with Comment Period (IFC). <sup>50</sup> CMS proposed an additional 13 telehealth services as temporary additions for public health emergency along with nine permanent additions to the Medicare telehealth services list in the August 3, 2020 Physician Fee Schedule Proposed Rule. <sup>51</sup>
<b>Modality</b>	Services can be provided through live video (synchronous). <sup>52 53</sup> Pre-recorded patient information can be provided for established patients. <sup>54</sup>	Audio-only (i.e., telephone) or online patient communication (digital communication via secure portal) services are allowed for specific services (evaluation and management, behavioral health counseling, or educational services). <sup>55</sup>
<b>Provider Type</b>	Physicians, nurse practitioners, physician assistants, nurse-midwives, clinical nurse specialists, certified registered nurse anesthetists, clinical psychologists and clinical social workers (only for established patients), and registered dietitians or nutrition professionals. <sup>56 57</sup>	No restrictions. All healthcare professionals who are eligible to bill Medicare are able to provide telehealth services. <sup>58</sup> Any practitioner working at FQHCs and RHCs acting within their scope (subject to state law) may provide telehealth services. <sup>59</sup>
<b>Provider Licensure</b>	Out-of-state providers must be licensed in the state where they are providing services, if they are licensed in another state.	Providers licensed in one state can provide services to patients in another state (including via telehealth). <sup>60</sup>
<b>Technology and Security</b>	Telehealth technology required to have interactive two-way audio/video capabilities. All modalities must be secure and HIPAA compliant to protect patient privacy. <sup>61 62</sup>	Telehealth technology must be interactive, but may be audio-only for certain services. HIPAA compliance is not currently being enforced, which allows platforms such as Skype, FaceTime, or Zoom to be used. <sup>63 64</sup>

Adapted from Environmental Scan on Telehealth in the Context of Alternative Payment Models (APMs) and Physician-Focused Payment Models (PFPMs) report prepared by NORC on behalf of ASPE for the PTAC, September 2020.

On August 3, 2020 CMS released a proposed rule for the Medicare Physician Fee Schedule for calendar year 2021. These policies aim to make certain Medicare telehealth reimbursements permanent and extend others until the pandemic ends. If the proposed rule is finalized, the policies would take effect on January 1, 2021. [Appendix B, Exhibit B-3](#) summarizes CMS' proposals for addition of services to the list of Medicare telehealth services.<sup>65 66</sup> The exhibit includes the list of telehealth services proposed for permanent addition to the fee schedule, proposed temporary additions, and services for which CMS is seeking comments on additions to Category 3 or permanent additions based on the following criteria: 1) whether, outside the pandemic, there are increased concerns for patient safety if service is furnished as telehealth; 2) if provision of service via telehealth jeopardizes patient safety; and 3) if all parts of service can be done using two-way audio/video technology.<sup>67</sup>

On October 14, 2020 CMS added 11 new services to the Medicare telehealth services list. This brings the total number of services CMS added to the telehealth service list since the beginning of the public health emergency to 135. Medicare now will pay for 144 services performed via telehealth. The levels at which Medicare FFS will reimburse for telehealth services vary based on the telehealth modality, settings, provider characteristics, and other factors. The telecommunication services (i.e., virtual check-ins, remote evaluation, and interprofessional consultation) are considered additive due to the expected brevity of the

services, and are therefore not reimbursed at payment parity.<sup>68</sup>

CMS advised Medicare Advantage plans that they may waive or reduce cost-sharing for telemedicine services. A review of the America's Health Insurance Plan (AHIP) website indicates that a large number of Medicare Advantage plans have opted to reduce or remove cost-sharing (co-pays, co-insurance and deductibles) for telemedicine services.<sup>69</sup>

## State-Level Changes

In parallel to federal efforts to expand access to telehealth, states took multiple steps to ease restrictions around telehealth through a combination of state authorities including waivers for Section 1135, Section 1915 (c) Waiver Appendix K, Medicaid Disaster Relief State Plan Amendment (SPA) and State Executive Orders. The Disaster Relief SPA allows states to make temporary changes to their Medicaid state plans and address access and coverage issues in response to the pandemic.<sup>70</sup> Appendix K may be utilized by states during emergency situations to request amendment to approved 1915(c) home and community-based services waiver authority in order to respond to an emergency.<sup>71</sup>

These actions have created flexibility in eligibility, enrollment, the appeals process, premiums and cost sharing, benefits, and provider requirements that have implications for patient treatment under COVID-19. Below, we highlight several important areas of flexibility offered under waivers.

**Licensure Flexibility.** All 50 states and Washington, D.C. have introduced licensure flexibilities. Several have temporarily waived out-of-state licensing requirements. This allows providers with equivalent licenses in other states to provide telehealth services across state lines. As of October 6, 2020 the Federation of State Medical Boards (FSMB) reported that 42 states had implemented waivers for modifying requirements for telehealth in response to COVID-19. Similar licensing agreements allow interstate practice for nursing, physical therapy, and psychology.<sup>72</sup>

**Consent Laws.** Forty states have made changes to their consent requirements.<sup>73</sup> Several states either waived or relaxed the requirement for written consent before the use of telehealth services, allowing providers to obtain verbal consent from patients.<sup>74</sup>

**Prescribing Laws.** Many states require some kind of prior relationship before a provider authorizes prescriptions; however, there is flexibility and variation since the pandemic in terms of how a relationship can be established (e.g., via an online screening questionnaire rather than an in-person exam). In many states, providers are temporarily able to prescribe controlled substance medications via telemedicine and treat patients for opioid use disorder via Medication Assisted Therapy (MAT).<sup>75</sup>

**Medicaid Policy Changes.** Changes to Medicaid policy targeted expansion of coverage or access to telehealth, and Medicaid payment parity for some telehealth services.<sup>76 77 78 79</sup> For example:

- As of July 23, all 50 state Medicaid agencies and Washington D.C. have issued guidance to allow audio-only telehealth services.
- Eighteen state Medicaid programs reimburse for store-and-forward services and twenty-one states reimburse for remote patient monitoring (RPM).
- Medicaid coverage of telehealth services has been expanded to treat substance use disorders, including assessment, medication-assisted treatment, counseling, medication management, and medication adherence with prescribed medication regimes.

Appendix B, Exhibit B-4 contains additional detail on the telehealth provisions under each type of waiver.

*Commercial Payment Parity Laws.* Because states govern private payer telehealth reimbursement policies, reimbursement of telehealth services vary from state to state. This creates barriers to telehealth being implemented and accepted broadly as a healthcare option.<sup>80</sup> However, multiple commercial health plans have made updates to their telehealth service coverage based on state guidance. Forty-two states and the District of Columbia have some form of parity law to govern private payer reimbursement of telehealth services. Previously, only nine states (Arkansas, Delaware, Georgia, Hawaii, Kentucky, Minnesota, Missouri, New Mexico,

and Utah) had payment parity laws that required commercial insurers to cover telehealth services equivalent to services covered in-person. Several states have issued temporary guidance requiring payment parity for specific telehealth services, bringing the total to 12 states, now including California, Arizona, and Washington.<sup>81</sup> Appendix B, Exhibit B-5 summarizes the changes made by commercial health plans.

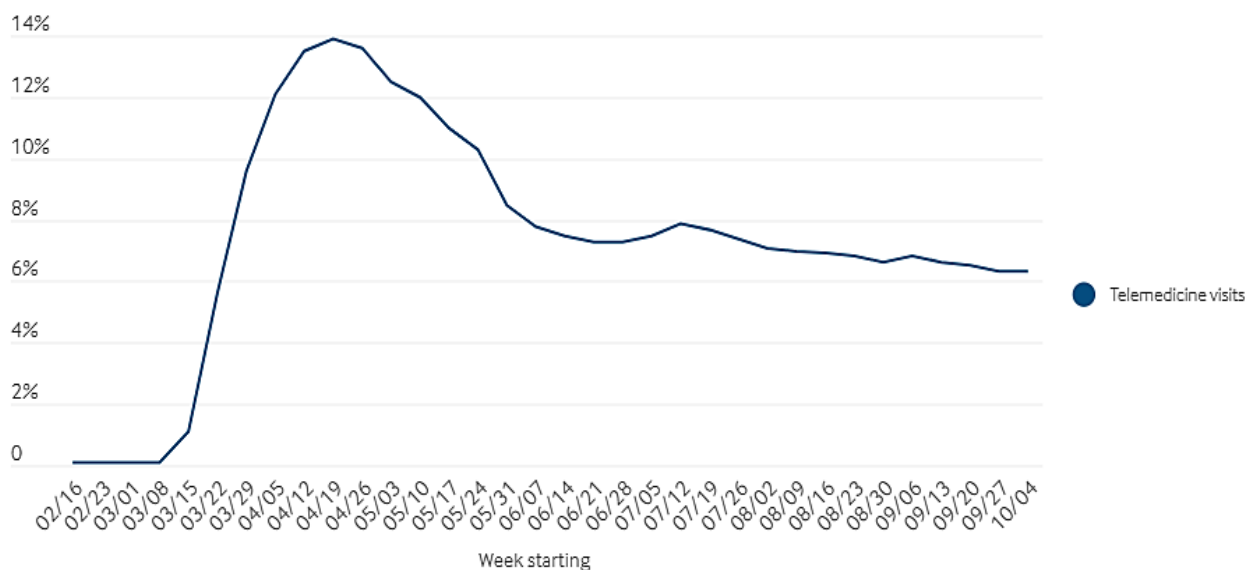
# Health System Delivery Landscape Changes

## Landscape Changes

The COVID-19 pandemic and the subsequent changes in regulatory, reimbursement, and clinician licensing practices have led to a dramatic increase in the use of telehealth. During the onset of COVID-19, office visits and testing that relied on in-person encounters declined as telehealth appointments surged. Researchers analyzing data from 50,000 providers across the nation found nearly a 60 percent drop in in-person outpatient visits between mid-February and early April, compared to pre-pandemic levels. Telehealth appointments increased by nearly 14 percent over the same period of time. However, this

shift in care delivery from in-person visits to telehealth did not make up for the number of visits lost since mid-March. While the number of in-person visits initially rebounded in mid-May and plateaued at 10 percent below pre-pandemic levels, recent data from mid-October 2020 show that in-person visits are back to pre-pandemic levels. Additionally, while the number of telehealth appointments has dropped in recent months, they are still trending at higher rates compared to pre-pandemic levels. Exhibit 2 below shows the number of telehealth visits per week as a percent of the baseline visits from mid-March to early October.<sup>82</sup>

**Exhibit 2. Number of Telemedicine Visits per Week as a Percent of the Baseline Visits (2/16-10/4)**



Source: Mehrotra A, Chernew M, Linetsky D, et al. The Commonwealth Fund. The Impact of the COVID-19 Pandemic on Outpatient Care: Visits Return to Prepandemic Levels, but Not for All Providers and Patients, October 15, 2020.



Similar trends in the number of telehealth visits are seen in Medicare, Medicaid, and Veterans Health Administration (VA) data. Over 12.1 million Medicare FFS beneficiaries (over 36 percent of people with Medicare FFS) received a telemedicine service during the pandemic between mid-March and mid-August 2020.<sup>83</sup> A *Health Affairs* commentary by CMS Administrator Seema Verma noted that prior to the pandemic, approximately 13,000 Medicare FFS beneficiaries received telemedicine in a week. However, during the pandemic in the final week of April, nearly 1.7 million beneficiaries received telehealth services.<sup>84</sup>

CMS also released a data snapshot reporting more than 34.5 million services delivered via telehealth to Medicaid and CHIP beneficiaries between March and June 2020. This represents an increase of over 2,600 percent compared to the same time period last year.<sup>85</sup> Similarly, the VA reported that the number of telehealth video appointments delivered via VA Video Connect (the VA's telehealth platform) increased from approximately 10,000 to 120,000 appointments per week during the pandemic. This corresponds to an increase of 1000 percent.<sup>86</sup>

## Trends in Primary Care

This section provides an overview of the trends in primary care visits under COVID-19. An issue brief from ASPE estimated nearly half (43.5 percent) of Medicare FFS beneficiaries received primary care via telehealth in April, compared with less than one percent (0.1 percent) before the pandemic in February. This represents a 350-fold increase in primary care telehealth visits from pre-pandemic levels. Similar patterns in primary care telehealth use were also observed in dually eligible Medicare and Medicaid patients as well as high-cost

Medicare FFS beneficiaries.<sup>87</sup>

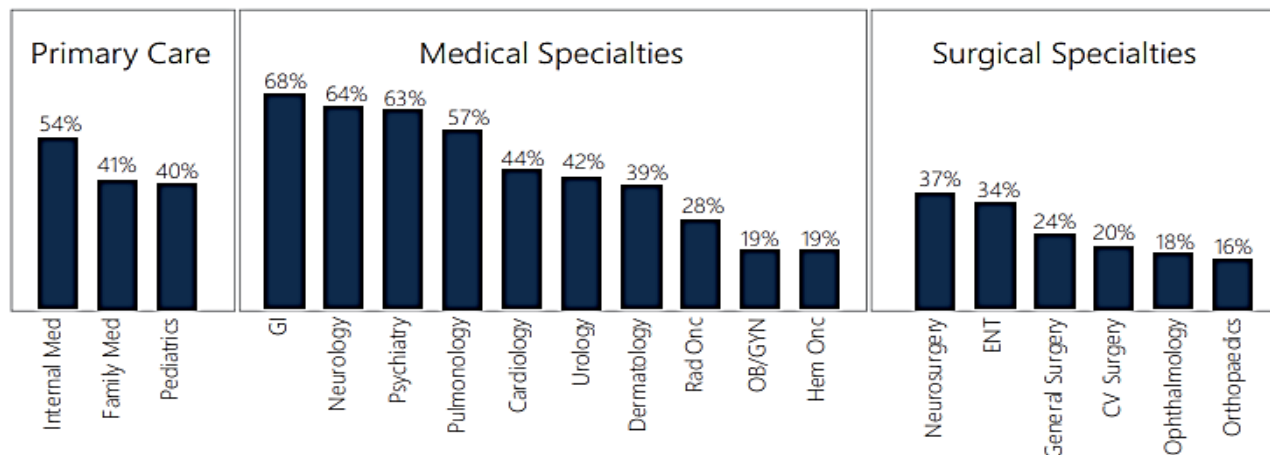
One cross-sectional study that examined a US National Disease and Therapeutic Index audit of more than 125.8 million primary care visits between 2018 and 2020 found that while telemedicine primary care visits jumped to 35 percent during the second quarter of 2020 (in comparison to less than 2 percent in the prior two years), it did not fill in the gap for missed primary care appointments. Despite the rise in telemedicine primary care, the overall number of primary care visits have decreased by 21 percent during the second quarter of 2020.<sup>88 89</sup> The same study also found that the content of telemedicine primary care visits differed from office-based encounters. For example, fewer blood pressure and cholesterol level evaluations were conducted during the telemedicine encounters.<sup>90</sup>

## Trends in Specialty Care

Trends in telehealth use by different specialty types emerged during the pandemic, as various clinical services were migrated to telehealth. Based on an analysis of nationally representative claims from all payers, researchers found that most specialties adopted some form of telehealth as a result of the pandemic. However, the specialties that saw the greatest expansion of telehealth at the early onset of the pandemic (the week of April 22, 2020) included gastroenterology (68 percent of interactions), neurology (64 percent), and psychiatry (63 percent). Specialties such as obstetrics/gynecology (OB/GYN, 19 percent), oncology (19 percent), and orthopedics (16 percent) saw the least adoption of telehealth during the pandemic (see Exhibit 3 below).<sup>91</sup>



**Exhibit 3. Trends in Telehealth Adoption by Specialty Type at the Early Onset of the Pandemic (Week of April 22, 2020)**



Source: Anderson S, Bertram R, Mayeda E, et al. The Chartis Group. Telehealth: Current Trends and Long-Term Implications, May 12, 2020.

More recent trends, as of September 2020, indicate that while the same four specialties remain with the highest telehealth adoption rates, psychiatry is now the most highly used telehealth service with more than double the rates (61.9 percent) compared to neurology (27.5 percent), gastroenterology (20.8 percent), and primary care (18.9 percent), which have decreased as in-person visits have begun to resume. The upward trend in psychiatry shows great promise for mental healthcare delivered via telehealth.<sup>92</sup>

Given that there are implicit limitations of telehealth that affect certain specialties more

than others, specialties that require patient contact to perform procedural work, such as surgical specialties (general surgery, orthopedics, etc.), saw some adoption of telehealth but lagged behind other types of clinical care.<sup>93</sup> Exhibit 4 below provides a snapshot of services migrating to telehealth during the pandemic across various clinical specialty areas. The table includes examples of telehealth use in gastroenterology, neurology, and psychiatry that saw the greatest expansion of telehealth under COVID-19. It also includes other less common examples of specialty areas deploying telehealth.

#### Exhibit 4. Examples of Clinical Services Being Migrated to Telehealth during COVID-19

Specialty Area	Example of Telehealth Use or Expansion due to COVID-19	Telehealth Modality	Outcome
<b>Examples of Telehealth Adoption in Specialties That Saw the Most Growth of Telehealth During the Pandemic</b>			
<b>Gastroenterology</b>	The University of Texas Medical Center transitioned to a gastroenterology electronic consultation program. Electronic consultations were performed for every outpatient referral without the need for in-person clinic visits. <sup>94</sup>	Telephone-based telehealth visits (consultations)	Telehealth reduced unnecessary clinic visits: 71% of the consultations were resolved without the need for a clinic visit.
<b>Neurology</b>	University of Pennsylvania implemented telemedicine for spine care and developed a remote spinal examination methodology where the patient is an active participant. <sup>95</sup>	Video conference via smartphones or computer	695 telemedicine visits were successfully conducted during a 4-week period (compared to no remote visits pre-COVID).
<b>Psychiatry</b>	Yale New Haven Psychiatric Hospital rapidly designed and deployed virtual intensive outpatient mental health services for complex patients, including group-based psychotherapy. <sup>96</sup>	Various platforms including telephone, MyChart video, and video conference via Zoom	Proportion of completed appointments during the telehealth deployment period increased significantly (68%) compared to the pre-COVID period (60%).
<b>Examples of Specialty Areas with Less Common Telehealth Deployment</b>			
<b>Obstetric Prenatal Care</b>	Columbia University Irving Medical Center-affiliated obstetric ambulatory prenatal care facilities located across New York City and surrounding metro areas transitioned to telehealth prenatal care tailored for high-risk patients. The model involved providing counselling services during telehealth and consolidating testing that would require an in-person visit. <sup>97</sup>	Virtual visits were performed with EpicCare mobile apps – Haiku and Canto, on mobile phones or tablets	This model for telehealth prenatal care eliminated approximately one-half of in person visits for low-risk patients.
<b>Pediatrics</b>	Vanderbilt University Medical Center expanded their telehealth capabilities within their patient portal infrastructure (My Health at Vanderbilt) by establishing mechanisms to allow remote patient portal enrollment for pediatric patients, while fulfilling compliance with institutional privacy and security policies. <sup>98</sup>	Video conference via patient portal-based telehealth	Weekly telehealth visits increased 200-fold for children and 90-fold for adolescents between pre-pandemic and pandemic (starting March 16) periods.

Specialty Area	Example of Telehealth Use or Expansion due to COVID-19	Telehealth Modality	Outcome
<b>Adolescent Medicine</b>	Children's Hospital of Philadelphia implemented a rapid telehealth scale-up for adolescent medicine, that included virtual trainings for clinicians, dissemination of weekly telehealth tip sheet, weekly telehealth update meetings, and rapid creation of EHR tools. <sup>99</sup>	Video conference via mobile EHR smartphone or tablet applications	Between March 16 and April 15, 392 telehealth visits were scheduled (telehealth was rarely used pre-COVID). They found no significant differences in telehealth visit completion rates by age, sex, gender, or insurance.
<b>Oncology</b>	University of California, San Francisco Health transitioned all in-person visits at their Comprehensive Cancer Center to telehealth, delivered through their established telehealth program. <sup>100</sup>	Video conference via Zoom	Video visits increased from 7-18% (prior to March 13) to 54%-72% (between March 16 to May 31, 2020), without any disparity based on race/ethnicity, primary language, or payer.
<b>Post-Acute Care Sub</b>	The Hospital-at-Home Model involves sending clinicians to patient homes along with technology, equipment, medication, and other supplies. Patients in hospitals can transition back home with post-acute care services, including both virtual (telehealth) and in-person care. In light of COVID-19, the Mayo Clinic recently partnered with a hospital-at-home service provider to launch the program. <sup>101</sup>	Combination of telehealth and in-person care	Reductions in readmissions, reduction in costs compared to in-hospital care, and patient satisfaction have been reported.

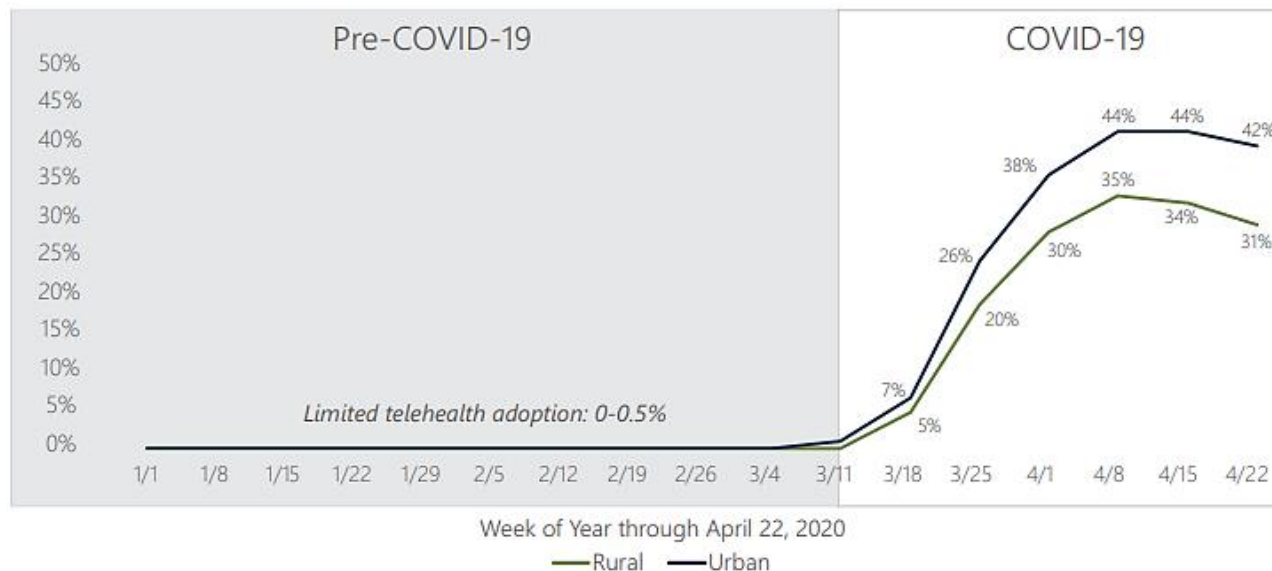
## Trends by Geography, Demographics, Payer Type, and Sub-Populations

This section focuses on the trends in telehealth use based on geography (rural vs. urban), demographics (age, race), payer type (public vs. private) and sub-populations, such as VA beneficiaries. Recent analysis of CMS' Medicare FFS claims data from March 17 through June 13, 2020 found that telehealth utilization was greater in urban areas (30

percent of Medicare FFS beneficiaries) compared to rural areas (22 percent).<sup>102</sup>

However, broadband internet access in rural areas was lower (an average of 78.9 percent of the population) compared to 99.8 percent coverage of the population in urban areas.<sup>103</sup> Similarly, analysis of nationally representative data from all payers, show that rural populations are nearly 30 percent less likely to utilize telehealth than urban populations (see Exhibit 5 below).<sup>104</sup>

## Exhibit 5. Rural vs. Urban Telehealth Adoption Rates



Source: Anderson S, Bertram R, Mayeda E, et al. The Chartis Group [internet]. Telehealth: Current Trends and Long-Term Implications, May 12, 2020.

In terms of demographics, there were no significant differences in the use of telemedicine by race, ethnicity, or age group among Medicare FFS and dually-eligible beneficiaries.<sup>105</sup> Similarly, a study that analyzed nationally representative data across all payers did not find evidence of racial disparity in telemedicine use.<sup>106</sup> Among Medicaid and CHIP beneficiaries, telehealth use was highest among ages 19-64, followed by children (age 18 and younger), and older adults (age 65+).<sup>107</sup> Among VA beneficiaries, telehealth appointments increased from approximately 10,000 to 120,000 appointments a week during the pandemic. This corresponds to an increase of 1000 percent in VA Video Connect visits.<sup>108</sup>

As for the use of telehealth by payer type, our research yielded conflicting evidence in the area. One study found differences in telehealth adoption rates based on insurance type—patients with Managed Medicaid coverage used telehealth less frequently (35 percent), compared to Medicare Advantage-insured (42 percent), and commercially insured patients (43 percent).<sup>109</sup> Another study, specific to primary care, reported finding no differences in the use of telemedicine by payer type.<sup>110</sup>

Exhibit 6 below summarizes some of the various types of telehealth encounters being deployed to facilitate patient encounters during COVID-19 along with the opportunities and limitations associated with each platform.<sup>111</sup>

## Exhibit 6. Telehealth Modality Types, Uses, Strengths, and Limitations

Modality	Example Uses	Opportunities	Limitations
<b>E-Consult:</b> <ul style="list-style-type: none"> <li>Asynchronous clinician-to-clinician communication based on record review (inpatient and outpatient)</li> </ul>	<b>During and after the initial surge:</b> <ul style="list-style-type: none"> <li>Assist frontline clinicians with triage of urgent patient referrals</li> <li>Assist frontline clinicians with management of low complexity patients where there is limited capacity among specialists</li> </ul>	<ul style="list-style-type: none"> <li>Time efficient for specialists, consolidates care for patients</li> <li>New inpatient clinician-to-clinician billing codes available</li> <li>Patient-initiated second opinion requests are possible</li> </ul>	<ul style="list-style-type: none"> <li>Potentially shifts work to frontline clinicians</li> <li>Lack of physical exam or direct communication with patients</li> </ul>
<b>Remote Patient Monitoring:</b> <ul style="list-style-type: none"> <li>Gather patient data outside traditional healthcare setting via connected device or patient reported outcomes (synchronous or asynchronous)</li> </ul>	<ul style="list-style-type: none"> <li>Efficient method of patient care, especially for those with chronic conditions</li> </ul>	<ul style="list-style-type: none"> <li>Enables clinician response to clinical data outside of regular clinic visits</li> <li>Recordings can be automatically sent to clinicians</li> <li>Payers support remote patient monitoring activities</li> </ul>	<ul style="list-style-type: none"> <li>Requires staffing infrastructure</li> <li>Lack of data integrated into EHR for sustainable workflow</li> </ul>
<b>Patient-Initiated Messaging:</b> <ul style="list-style-type: none"> <li>Synchronous chats with automated or live agents</li> </ul>	<ul style="list-style-type: none"> <li>Time-efficient handling of straightforward issues</li> </ul>	<ul style="list-style-type: none"> <li>Patient initiates communication when convenient</li> <li>Patients are able to access frequently asked questions (FAQs) and use self-service tools</li> </ul>	<ul style="list-style-type: none"> <li>Requires technology infrastructure and staffing</li> <li>Potential lack of context, and so requires tight integration with the EHR to be optimally useful</li> </ul>
<b>Asynchronous Patient Portal Messaging</b> <ul style="list-style-type: none"> <li>A type of “store and forward” modality where a message is communicated from the patient to a provider who can interpret and respond at a later time</li> </ul>	<ul style="list-style-type: none"> <li>Assists clinicians in management of patients with chronic conditions</li> </ul>	<ul style="list-style-type: none"> <li>Live or autonomous text-based options</li> </ul>	<ul style="list-style-type: none"> <li>Lack of integration of data into EHR</li> </ul>

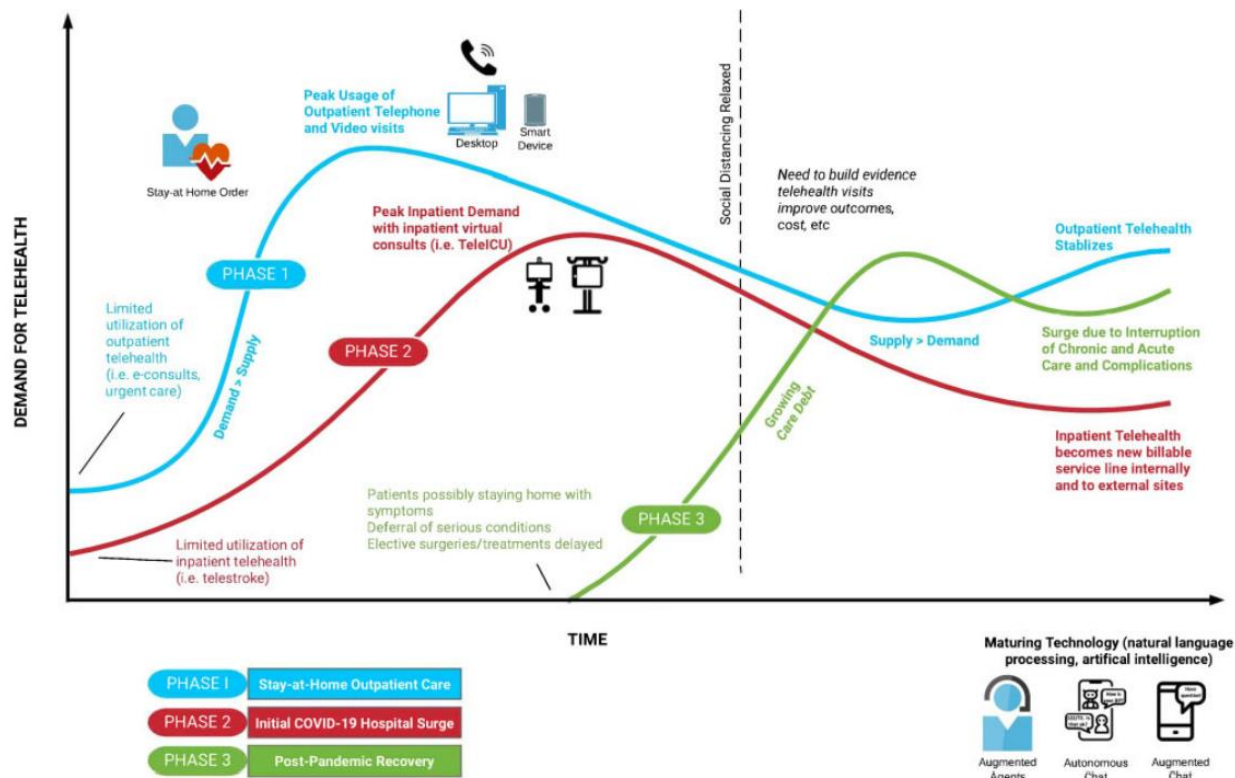
Modality	Example Uses	Opportunities	Limitations
<b>Telephone Visits:</b> <ul style="list-style-type: none"> <li>Synchronous patient-clinician communication by phone</li> </ul>	<b>During and after the initial surge:</b> <ul style="list-style-type: none"> <li>Replaces some face-to-face visits</li> </ul>	<ul style="list-style-type: none"> <li>Universally accessible, even in the most ill/low socioeconomic status patients</li> </ul>	<ul style="list-style-type: none"> <li>Currently devalued by most payers</li> <li>Inability to conduct a physical exam, including loss of nonverbal cues</li> </ul>
<b>Video Visits:</b> <ul style="list-style-type: none"> <li>Synchronous patient-clinician communication with both audio and video, with possible ancillary and telemetry equipment</li> </ul>	<b>During COVID-19 surge:</b> <ul style="list-style-type: none"> <li>Replaces face-to-face visits</li> </ul> <b>After the initial surge:</b> <ul style="list-style-type: none"> <li>Expansion of virtual interactions across all sectors of the healthcare system</li> <li>Unbundling of services through technology</li> </ul>	<ul style="list-style-type: none"> <li>Slight improvement in clinical care (nonverbal communication, physical exams, depending on bedside facilitator and peripherals)</li> <li>More favorable reimbursement by payers</li> </ul>	<ul style="list-style-type: none"> <li>Technology requirements: outpatient requires broadband internet, computer/smart device; may need digital peripherals (e.g., stethoscope, otoscope)</li> <li>Most complex/sickest patients may be least able to participate/access care</li> <li>Inpatient requires mobile camera with microphone, speaker, and zooming functionality</li> <li>Need for infection prevention and sanitization protocol for devices</li> </ul>

Source: Wosik J, Fudim M, Cameron B, et al. Telehealth transformation: COVID-19 and the rise of virtual care. JAMIA. 2020 June;27(6): 957–962.

Drawing from the experiences reported by multiple healthcare organizations, one study developed a framework that illustrates the role telehealth has played in transforming healthcare delivery during the three phases of the COVID-19 pandemic: 1) stay-at-home outpatient care, 2) initial COVID-19 hospital surge, and 3) post-pandemic recovery (see Exhibit 7 below). It depicts the integration of people, process, and technology to support

telehealth, as well as the likely evolution of health system service demand as the pandemic unfolds over time. As the country moves out of the immediate crisis phase, it depicts a peak in demand for telehealth, followed by a stabilization phase for telehealth services coupled with a renewed need for in-person services to address acute health crises as deferred care needs and chronic conditions begin to necessitate care.<sup>112</sup>

## Exhibit 7. Role of Telehealth in the Transformation of Care Delivery during COVID-19



Source: Wosik J, Fudim M, Cameron B, et al. Telehealth transformation: COVID-19 and the rise of virtual care. JAMIA. 2020 June;27(6):957–962.

### Role of Private Telehealth Companies

Prior to the pandemic, the four largest U.S. telehealth providers that offered services in all states were Amwell Medical Group, Teladoc Health, Inc., MDLive, and Doctor on Demand.<sup>113</sup> During the pandemic, these private telehealth companies saw dramatic growth in service utilization and revenue.<sup>114</sup> Amwell saw an increase in the average number of telehealth visits provided in a day from 5,000 (prior to the pandemic) to 50,000.<sup>115</sup> Likewise, the number of virtual visits conducted by Teladoc more than tripled (with up to 20,000 visits a day) in comparison to 2019.<sup>116 117</sup> These telemedicine companies facilitate access to contracted providers that offer a range of telehealth services, including primary care, dermatology, behavioral health,

maternal and child care, and STD testing.<sup>118 119</sup> Numerous health systems and health plans have partnered with these companies to expand access for their patient populations with “24/7” telemedicine visits.<sup>120 121</sup> Several commercial health plans offer telehealth as a covered benefit via Amwell, Teladoc, and MDLive (See [Appendix B, Exhibit B-5](#)).<sup>122</sup> Teladoc Health, Inc. also offers licensable telehealth platform services to health systems. For example, JeffConnect (the telehealth program at Jefferson Health) utilizes Teladoc Health’s platform,<sup>123</sup> while Penn State Health’s OnDemand telehealth services app is powered by Amwell.<sup>124</sup> There are also telemedicine vendors, such as Aetonix Systems and Advanced ICU Care, which provide niche services like tele-ICU and RPM services to health systems.<sup>125 126</sup> Since



the start of the pandemic, there have been several mergers and acquisitions between telehealth companies.<sup>127 128 129</sup> The most notable merger was Teladoc and Livongo (a telehealth company that provides remote health management services), which led to the creation of Telavongo, making it the most dominant player in the telehealth industry.<sup>130</sup>

## Expanded Uses for Telehealth under COVID-19

In this section, we discuss the development and novel uses and/or expansion of telehealth capabilities during the pandemic, as well as the populations typically using these services.

Telehealth has played an important role in delivering care to COVID-19 patients. One example of a novel use of telehealth to treat COVID-19 patients is the expansion of tele-intensive care unit (Tele-ICU) technology to help hospitals treat and monitor the large influx of COVID-19 patients in ICUs, while trying to minimize risk to frontline clinicians and preserve limited supplies of personal protective equipment (PPE). Tele-ICU consists of two-way high quality bedside video chat that allows clinicians to view patients and their monitoring equipment to check vital signs remotely. Several metropolitan areas including New York City, which was the epicenter of COVID-19 cases early in the pandemic, used tele-ICUs as hospitals ran out of ICU-beds. Similarly, the Swedish Health System in Seattle metropolitan area, Emory Healthcare in Georgia, and Northwell Health in New York, have leveraged tele-ICUs to treat COVID-19 patients while addressing the shortage in ICU-beds and limiting clinician exposure.<sup>131</sup>

Prior to the pandemic, emergency departments (ED) typically used telehealth to

improve patients' access to specialist care such as rural trauma care, acute stroke care, and to improve burn and trauma transfer decisions. Telestroke has been an important application of telehealth in EDs since the 1990s, particularly in critical access hospitals where there is a shortage of neurology stroke specialists. However, the widespread regulatory changes ushered in by the pandemic has provided EDs across the nation with opportunities to explore new adaptations of telehealth while also addressing the critical shortage of PPEs and limiting unnecessary exposure.<sup>132</sup> [Appendix B, Exhibit B-6](#) shows various recent applications for telemedicine in EDs as a result of the pandemic, including tele-triage and assessment of COVID-19 patients. EDs in various hospitals across the country expanded or newly implemented tele-triage program as a solution to reduce risk of infection due to COVID-19.<sup>133 134</sup> Tele-triage allows non-emergency medicine staff to triage and evaluate patients for COVID-19 remotely. This helped emergency medicine physicians focus their attention on more critical patients and limited face-to-face contact between patients and providers. Tele-triage has been shown to provide a safe and efficient alternative to in-person screening of patients while allowing greater flexibility in provider schedules.<sup>135</sup> Additionally, anecdotal evidence from ED physicians suggests that telehealth has reduced exposure risk to COVID-19 by allowing them to discharge patients and conduct follow-ups remotely.<sup>136</sup>

Numerous regulatory policies and Section 1135 waivers of federal requirements have given long-term care providers flexibility to meet the demands and healthcare needs of long term care residents under the pandemic. CMS waived certain requirements for physicians and non-physician practitioners to

perform in-person long-term care resident visits. Instead, these visits can be furnished via telehealth.<sup>137</sup> According to CMS, 26 percent of Medicare beneficiaries who received nursing home visits between March and June, did so by telehealth.<sup>138</sup> The San Diego County Senior Emergency Care Initiative is one such effort to connect nursing homes and EDs via telehealth. As of May 2020, three EDs had connected with over 12 local nursing homes using telehealth to help assess whether the residents can be treated in place or need to be transferred to the hospital.<sup>139</sup>

Health systems have also seen an expansion in the use of telehealth modalities such as audio-only services, patient portals, and remote monitoring technologies. One example of the use of remote monitoring technologies to better manage COVID-19 patients is an automated short message service (SMS)-based program, named “COVID Watch,” developed by Penn Medicine. Patients with presumed or confirmed COVID-19 infection are invited to enroll in COVID Watch. Once enrolled, patients receive automated twice-daily text messages to self-assess COVID-19-related symptoms. Depending on patient responses received via text messages, providers may conduct additional assessments or refer them to the ED.<sup>140</sup> Additionally, COVID Watch helps notify all individuals that were in close proximity to an infected person even if they do not know that person. After a successful pilot testing, COVID Watch is now the official app for the state of Arizona for COVID-19 contact tracing and exposure notification.<sup>141</sup>

Similarly, the use of audio-only telehealth services has increased significantly. Based on CMS’ internal analysis of Medicare FFS claims data, from March 17 through June 13, 2020,

over 3 million Medicare beneficiaries received telehealth services via traditional telephone. This corresponds to nearly one-third of beneficiaries receiving a telemedicine service.<sup>142</sup> The use of patient portals in care management has increased significantly during the pandemic.<sup>143 144</sup> Patients are using these portals to track symptoms, schedule appointments, conduct telehealth visits, and conduct self-management of COVID-19 symptoms. Patient portals are also being used outside the traditional clinic or hospital setting in testing sites as a key tool for connecting patients to care and disseminating results.<sup>145</sup>

Although evidence has shown an expansion in the use of various telehealth modalities as a result of the pandemic, we found limited data that described trends in the use of different telehealth modalities (e.g., audio-only vs. video-teleconferencing). One explanation for this may be due to the limitations in the way that modalities are captured in available claims data, given that clinicians have faced challenges around accurate coding/billing for telehealth amid its rapid expansion.<sup>146</sup>

# Outcomes

In considering the outcomes and significance of telehealth deployment, we focused our findings on patient experience, the effect of telehealth on disparities, unintended consequences of its rapid deployment, and the potential for future research and policy development.

## Patient Experience

Prior to the pandemic, there were a limited number of studies on patient experience with telehealth.<sup>147</sup> The expansion of telehealth under the pandemic has presented more opportunities to gather qualitative and quantitative survey data to understand patients' experience and satisfaction with telehealth. Early in and predating the pandemic, there are many examples of patient experience studies that are robust and methods-driven.<sup>148 149 150 151</sup> However, patient experience specific to telehealth tends to be limited to single practice, department, or hospital implementation reports or reviews.<sup>152</sup> <sup>153</sup> More generalizable data are becoming available with time, for example, with the release of the beta Clinician and Group CAHPS Survey 4.0 by AHRQ—which was designed to be applicable to any ambulatory care visit including those delivered in-person, by phone, or by video call and also includes supplemental telehealth technology questions.<sup>154</sup>

There is early evidence that patients are generally pleased with their experience using telehealth. At the beginning of the pandemic, Press Ganey administered a telemedicine survey to 30,000 consumers over a 6-week

period, with analysis at the end of April. This survey found that patients overwhelmingly had positive virtual interactions with their care providers. Responses to technology-related survey items showed that younger patients were more comfortable using telehealth technology, and families of pediatric patients reported high satisfaction with all aspects of their telemedicine experience.<sup>155</sup>

Another survey administered by the Veterans of Foreign Wars (VFW) National Legislative Service of veterans seeking care found that 47 percent and 34 percent of respondents reported their VA routine care and non-VA care appointments, respectively, were converted to telehealth or canceled. Fewer critical care or essential care appointments were canceled (34 percent of VA and 22 percent of non-VA appointments). Despite the number of appointments that were switched to telehealth, the survey found that 59 percent to 62 percent of veterans were either satisfied or very satisfied with the care they received from their VA and non-VA providers.<sup>156</sup>

A July 2020 survey of patients enrolled in a RPM program found 74 percent of 300 respondents would be extremely likely to recommend their doctor.<sup>157</sup> Other small-scale surveys and qualitative studies have found positive patient experiences in disciplines such as surgery (91 percent of patients reported effective communication with their provider, and 67 percent indicated that their telemedicine visit was more convenient than a clinic visit),<sup>158</sup> emergency departments (patients reported decreased feelings of loneliness, anxiety, and isolation),<sup>159</sup> and

gastroenterology practices (67 percent of respondents rated telehealth visit quality as good/better than face-to-face, and 96 percent were somewhat/very satisfied with their care).<sup>160</sup>

## Patient-Centered Health Care

Much of the current literature focuses on patient outcomes and satisfaction with less emphasis on patient-centered health care.<sup>161</sup> Only a single systematic review of person-centered outcomes was found covering literature during the pandemic, in this case from January 1 to May 25, 2020. The review found evidence that telehealth, referred to by the broader term “e-health”, can be used to support patient-centered healthcare through a variety of patient-facing services. For example, the article found evidence of e-health being used to support patient-centered care via digital self-triage and scheduling tools like a COVID-19 symptom checker linked to EHRs. It also found evidence of successful use of e-health in contact tracing and counseling.<sup>162</sup> It is likely that additional research on patient experience will be conducted and published as the pandemic continues, given the currently limited discussion of how to use telehealth to provide patient-centered care.

## A Need to Better Understand Best Practices for Successful Delivery of Care via Telehealth

In spite of positive patient experiences during telehealth encounters, there are still many unknowns regarding best practices for delivering safe, high quality, and effective care using telehealth. While CMS and various provider associations including the American

Medical Association (AMA) have prepared resources and telemedicine toolkits, these largely focus on supporting the implementation of telemedicine programs (e.g., offering guidance on technology and billing practices) rather than offering clinical guidelines for providing care via telemedicine.<sup>163</sup> There are fewer guidelines available that can help healthcare providers determine how and when telehealth should be used in patient care, which modality should be used (e.g., audio only, video teleconferencing, RPM, or asynchronous) and when an in-person visit may be more appropriate for the patient. The American Psychiatric Association provides an in-depth toolkit with guidance on addressing the needs of different patient populations—for example, rural and urban populations, child/adolescent and elderly populations, or with youth involved in the juvenile detention system.<sup>164</sup> There may be more nuanced resources available for telemental health delivery because this area of telehealth was already starting to grow prior to the pandemic.<sup>165</sup>

The National Consortium of Telehealth Resource Centers (NCTRC), funded by a HRSA grant, provides another centralized resource that contains several implementation and best practices playbooks. These guidelines, produced by regional telehealth resource centers, focus mainly on state-level implementation of telehealth, telehealth etiquette, technology toolkits, and policy trackers.<sup>166</sup> They vary by resource center as priorities differ from region to region. Toolkits housed in the NCTRC but produced by other regional resource centers contain a variety of resource types. Examples of toolkits include a library of peer-reviewed articles telehealth,<sup>167</sup> a telehealth etiquette checklist,<sup>168</sup> and a telehealth platform developer’s toolkit.<sup>169</sup>

These toolkits, although tailored to the priorities of each region, are intended for broader dissemination to assist telehealth implementation; however, it is unclear to what extent they are visible and being used.

The Northeast Telehealth Resource Center has compiled a resource list that includes clinical guidelines for telehealth covering multiple clinical topic areas (e.g., conducting needs assessments, subspecialty care in rural settings, treating patients with cognitive disabilities via telehealth). Consistent with our findings about provider association resources for telehealth, there appear to be more resources available for mental health/behavioral health/psychiatry than other specialty types in the list compiled by the Northeast Telehealth Resource Center. Many of the resources appear to focus on billing guidance or policy guidance or practice implementation; however, the bulk represent systematic reviews or studies of clinical effectiveness, rather than actual evidence based clinical recommendations or guidelines for best practices.<sup>170</sup>

Other contextual and population-specific considerations where providers may need more guidance in telehealth implementation include assessments of provider competency with technology, obtaining information on and responding to patient's cultural values, maintaining data confidentiality, proper consent procedures, and the potential legal ramifications of remote treatment.<sup>171</sup> Best practices development efforts also need to account for privacy. Rapid uptake of telehealth prompted rapid and comprehensive review of HIPPA rules regarding patient protection and telehealth communications safety; ongoing use will require a similar review of privacy

rules for CHIP, Medicare, and Medicaid as well.<sup>172</sup>

## Disparities

The COVID-19 pandemic is shining a light on health disparities in this country, with communities of racial and ethnic minorities suffering a disproportionate burden of and negative health outcomes associated with COVID-19 infection. Additionally, the elderly, those with preexisting conditions, and individuals of lower socioeconomic status are also at higher risk for complications from COVID-19.<sup>173</sup>

Although telehealth has risen to prominence during the pandemic, one of its potential pitfalls is the role it may play in exacerbating health disparities for these vulnerable populations. Prior to the pandemic there was evidence of a “digital divide” that limited telemedicine access within certain populations. For example, one 2018 study showed the proportion of Medicare beneficiaries without access to a laptop/desktop with broadband or a smart phone was 26 percent, and the proportion without digital access was significantly higher among low-income beneficiaries, those with lower levels of education, who identified as black or Hispanic, and those who were disabled or received Medicaid. Fifty percent of beneficiaries with incomes at or below 100 percent of the federal poverty level (FPL) lacked digital access, compared to 11.5 percent of those at or above 400 percent of the FPL.<sup>174</sup>



### **Barriers to Use of Telehealth by Vulnerable Populations:**

- Limited broadband internet access
- Lack of access to audio-visual enabled technology
- Language barriers and lack of interpretation services
- Hearing and visual impairment
- Digital literacy
- Uninsured
- Under-insured where health plan does not cover telehealth modalities
- Privacy and security concerns

Another study that assessed preparedness for telehealth estimated that 13 million US seniors were unprepared for telehealth due to lack of experience with the necessary technology.<sup>175</sup> Similarly, surveys from the Pew Research Center showed that despite increasing percentages of adults who use the internet (~50 percent in 2000, and 92 percent in 2019), racial disparities exist: 79 percent of white adults use broadband at home compared to 66 percent of Black adults and 61 percent of Hispanic adults. However, it is important to note that similar disparities exist in home broadband use between urban and rural adults, with 75 percent of urban adults using home broadband compared to 63 percent of rural adults as of 2019.<sup>176</sup>

Despite pre-pandemic data that foreshadowed differential access to telehealth services by race, ethnicity, and other demographic factors, preliminary data released by CMS shows different results. An analysis of Medicare FFS claims data from March 17 to June 13, 2020 found minimal difference in telehealth utilization when stratified by race or ethnicity—25 percent of Asian beneficiaries had received some form of telehealth care, 29 percent of Blacks, 27 percent of Hispanics, and 28

percent of whites. Usage was also similar across age groups: 25-34 percent of Medicare FFS beneficiaries have received telehealth services in one form or another (34 percent below the age of 65, 25 percent ages 65-74, 29 percent ages 75-84, and 28 percent ages 85 and over).<sup>177</sup> A JAMA study showed similar findings—that there is no evidence of racial disparity in use of telemedicine. Likewise, an audit of the US National Disease and Therapeutic Index of nearly 126 million primary care visits between 2018 and mid-2020 found similar increases in telehealth visits between white individuals (19.3 percent) and Black individuals (20.5 percent).<sup>178</sup>

One explanation is that the diverse modalities included in the regulatory definition of “telehealth” may be helping to mitigate some of the disparities. As the Pew Survey demonstrated, broadband use may not be equal across racial and ethnic groups, but it shows that over 95 percent of whites, Blacks, and Hispanics own some kind of cellphone (with or without smartphone capabilities).<sup>179</sup> Payment parity laws, federal or state policy, and/or commercial payer guidelines allow reimbursement for audio-only telehealth services, and therefore, the broadened definition of telehealth may be closing the utilization gap.<sup>180</sup>

Pilot studies conducted prior to and during the pandemic, in addition to some health system reports, have shown success with engaging racially diverse patient groups through telehealth interventions that utilize mobile text messages.<sup>181</sup> One study conducted in 2019 examined patient characteristics associated with their choice of an office visit, video telemedicine visit, or telephone visit. It found that Black patients were more likely than white patients to choose both a telephone and video

telemedicine visit. The same study also found that those living in a lower-socioeconomic status neighborhood were significantly less likely to choose a video visit.<sup>182</sup> More evidence assessing variation in utilization patterns by race and telehealth modality is needed to elucidate these patterns.

Another explanation for why telehealth utilization does not appear to differ by race to the extent many predicted may be related to the types of providers that are offering telehealth visits during the pandemic—specifically—FQHCs have existing investments in data infrastructure and often provide care to minority populations.<sup>183</sup> Recent research on outpatient telehealth visit trends during the pandemic showed that telehealth visits make up a higher proportion of total visits per week for FQHCs compared to other providers. As of late July, FQHCs provided 18 percent of all of their visits via telehealth compared to other providers who conducted only 8 percent of visits via telehealth.<sup>184</sup> As above, the data on setting-specific trends and the role of pre-pandemic telehealth capabilities is continuing to emerge, and therefore, it is too early to determine the true extent to which these factors influence telehealth utilization patterns.

In addition to the regulatory actions taken to prevent of disparities related to the digital divide, efforts are being made to expand broadband access. There are examples at the federal, state, and city level of funding to support low-cost Wi-Fi hotspots citywide, and commercial internet providers reducing broadband rates or temporarily making them free.<sup>185 186 187 188</sup>

Reports from the field have raised concerns about access barriers that could exacerbate disparities for patients with language barriers

(e.g., challenges utilizing interpreter services during telemedicine encounters), hearing and visual impairment, or lack of digital literacy. One study reported challenges for and limited uptake by patients with limited English proficiency (i.e., call-in or in-person interpreters presented additional barriers), digital literacy, and low levels of trust in technology.<sup>189</sup> Two studies reported that limited access to broadband may require some families to choose between having a telehealth visit and participating in remote school or work.<sup>190 191</sup>

While telehealth modalities authorized under the public health emergency declaration have allowed the healthcare system to mount a rapid response and facilitate patient care during the pandemic, there is a need for additional research into disparities. Their true extent is currently unknown, given conflicting data and incomplete data. What is clear is that sustaining telehealth during the pandemic and post-pandemic periods will require additional research to inform necessary policy updates.



# Telehealth Beyond the Pandemic

Prior to the COVID-19 pandemic, there were multiple policy restrictions that limited telehealth use.<sup>192</sup> There were and continue to be questions around the potential for fraud and abuse of telehealth service delivery and concerns about patient safety. However, as described in this report, the expansion of telehealth under the pandemic has revealed new uses and adaptations of telehealth. While telehealth visits have actually decreased in more recent months, they are still higher than pre-pandemic rates (0.01 percent of total visits).<sup>193</sup> Providers, payers, and policy makers are anticipating that telehealth will continue to be an important tool in delivering patient-centered, high-quality, and efficient care. To this end, there have been discussions by key stakeholders and policy makers on which of the temporary policy changes would be important to continue beyond the pandemic and which should revert to their pre-pandemic status.

At their public meeting in early September, the Medicare Payment Advisory Commission (MedPAC) discussed considerations for continuing the regulatory and payment policies for telehealth expansion beyond the public health emergency.<sup>194 195 196</sup> One option they discussed involved continuing the telehealth expansions for clinicians participating in Advanced APMs that assume financial risk. They also considered the implications of either returning to the pre-public health emergency telehealth rules for FFS beneficiaries or returning to a more limited expansion in order to mitigate concerns regarding fraud, abuse and overuse of telehealth services. The limited expansion

they considered included continuing payment for telehealth services, but at a lower rate than is being reimbursed under the public health emergency and/or continuing audio-only telehealth services, as this was noted as a critical tool for ensuring consistent access to care for patients who do not have broadband internet needed for video-enabled telehealth visits. Notably, CMS excluded payment for audio-only telehealth visits in the proposed 2021 physician fee schedule that was released in early August 2020.<sup>197</sup>

## Key Considerations for the Sustainability of Telehealth:

- More research is needed on best practices for telehealth delivery and patient safety. This research should consider video and audio-only telehealth modalities.
- Fraud, misuse, and abuse in telehealth delivery is a concern and new tools, methods and data should be used to detect and prevent this from happening.
- Telehealth has the potential to aid care coordination, especially in serving hard-to-reach populations, but rules, protocols, standards and certification requirements are necessary to prevent fragmentation and data silos.
- There is limited data on telehealth costs to payers, providers, patients, and family caregivers.
- More evidence is needed to understand and address concerns related to patient safety and quality of care provided via telehealth.

In September another group of stakeholders called the Taskforce on Telehealth Policy (TTP) released a set of recommendations for realizing the potential of telehealth.<sup>198</sup> This TTP was convened by the Alliance for Connected Care, the National Committee for Quality Assurance, and the ATA. They provided a set of telehealth recommendations across three areas: 1) patient safety and program integrity, 2) data flow, care coordination and quality measurement, and 3) the effect of telehealth on cost of care. The TTP found that there is a strong evidence base for the provision of safe and high quality care using telehealth, particularly for chronic diseases.<sup>199</sup>

<sup>200</sup> However, they noted the need for more research of telehealth use in certain areas, such as prescription of controlled substances via telehealth, particularly for medication-assisted treatment of substance abuse disorders. Their overarching policy recommendations were to make the several temporary telehealth policy changes permanent. These policy changes include those that removed restrictions around originating sites for telehealth service,

conditions for which telehealth can be used, use of telehealth to establish patient-clinician relationships, allowing use of audio-only telehealth where there is evidence of effectiveness, use of asynchronous telehealth including remote monitoring on a limited basis as more evidence is gathered, allowing telehealth access across state lines while maintaining patient protections, and allowing insurers to provide telehealth technology as a supplemental benefit. They emphasized the importance of policies that expand access to broadband and telehealth technology to underserved populations, as well as initiatives that address digital literacy and lack of trust in telehealth. The TTP recommendations acknowledged that additional research is imperative to informed policy decisions, and in particular, it emphasized the need for more evidence on the best practices for delivery safe and effective telehealth services.<sup>201</sup>

# Conclusion

The regulatory, reimbursement, and licensing changes, and widespread stay at home orders in response to the pandemic have resulted in a dramatic increase in the use of telehealth with a corresponding drop in office visits and testing that relies on in-person treatment. As the health system has continued to adapt, telehealth use has been leveraged in providing clinical care in a variety of settings (e.g., pediatrics, adolescent medicine, oncology) for a variety of services. Specialties have been differentially affected, with some migrating rapidly to telehealth (e.g., mental health and primary care), and others reporting precipitous drops in patients seeking treatment (e.g., surgical specialties). Telehealth visits have surged among Medicare, Medicaid, and CHIP beneficiaries, as well as veterans accessing VA and non-VA services, with usage trends depending on factors like geography, telehealth modality, and (to varying extents) demographics and insurance type. Telehealth has also played an important role in delivering care to COVID-19 patients through services such as tele-ICU, RPM, ED tele-triage.

Given the rapid deployment of telehealth, there has been limited time to establish and disseminate best practices for clinical treatment, billing, or measurement of impact. This has led to questions in the field about the implications of long-term telehealth use for care quality, patient outcomes, and patient safety, as the pandemic continues. Thus far, research on patient experience with telehealth has been limited to single practice, department, or hospital implementation and review studies or reports, although as a whole the available data suggests that patients are

satisfied with their virtual interactions with providers. Evidence is very limited on how providers can use telehealth to deliver patient-centered care, with a single meta-analysis covering January through May.

There are limited data and limited studies that support national level analysis of the effect of telehealth on disparities. Telehealth has increased disparities for populations on the wrong side of the “digital divide” without access to audio or video capabilities (e.g., in the form of broadband, smartphones, or sufficient cell phone minutes). However, certain policies have been designed to mitigate the potential for telehealth to widen disparities (e.g., flexible provider/patient location, allowing “audio-only” services). More research is needed to discern patterns of differential usage, including understanding how different telehealth modalities are being used to reach certain populations and the consequences for their care. Relatedly, some studies suggested that assumptions need to be reconsidered when it comes to optimal modes of communications to reach patients, especially for those at high risk for disparities in access or care delivery.

As a next step, NORC will hold TEP discussions that will draw upon these findings to identify areas where there is strong evidence of telehealth efficacy and opportunities for dissemination and implementation of such areas. It will also involve discussion of telehealth trends that merit additional CER including settings, modalities, clinical areas, and populations for whom the effects of telehealth lacks sufficient research evidence.

# Appendix A: Expanded Methods

## Exhibit A-1. Search Terms for Grey and Published Literature

Area	Proposed Search Terms
Telehealth	telehealth, telemedicine, remote patient monitoring, remote consultation, virtual visit, telepathology, teleradiology, telerehabilitation, mHealth
AND	
COVID-19	coronavirus, COVID-19, SARS-CoV-2, pandemic
Regulation and Reimbursement	CARES Act, regulation, telehealth, reimbursement, Medicare, Medicaid, coverage policy, payment, billing, requirements
Delivery and Use	utilization, use, services, guidelines, standards, primary care, settings, specialty, population, patients
Barriers/Challenges/Outcomes	gaps, unintended consequences, health disparities, vulnerable populations, challenges, barriers

## Exhibit A-2. Inclusion/Exclusion Criteria

<p><b>Inclusion/Exclusion Criteria</b></p> <p>Included literature must comment on telehealth in the U.S. and meet the following additional criteria:</p> <ul style="list-style-type: none"> <li>• <b>Timeframe: January 30, 2020 – October 16, 2020</b></li> <li>• <b>Country of Origin: United States</b></li> <li>• <b>Telehealth definition:</b> <ul style="list-style-type: none"> <li>• The use of medical information exchanged from one site to another via electronic communications to improve a patient’s clinical health status. Note: Communication must be bidirectional.</li> <li>• Telehealth includes a growing variety of applications and services using two-way video, smart phones, wireless tools and other forms of telecommunications technology, as well as audio-only visits via telephone. Note: Computer systems can be involved (e.g., automated messaging).</li> </ul> </li> <li>• <b>Telemedicine definition (a subset of telehealth):</b> <ul style="list-style-type: none"> <li>• Seeks to improve a patient's health by permitting asynchronous or two-way, real time interactive communication between the patient and the physician or practitioner at the distant site. This electronic communication means the use of interactive telecommunications equipment that includes, at a minimum, audio and video equipment. (Source: PCORI, CMS).</li> </ul> </li> <li>• <b>Resource must cover at least one framework component (for webinars, at least two framework components):</b> <ul style="list-style-type: none"> <li>• Policy Context—regulatory policy at the federal or state level; payment policy, including all payer types</li> <li>• Health System Delivery—population in terms of disease, demographics, etc.; providers or provider-to-patient use; technology infrastructure; settings; modalities</li> <li>• Outcomes—disparities experienced by vulnerable populations, consequences for health equity (prevention, access, etc.), patient experience of telehealth</li> </ul> </li> <li>• <b>Specific Exclusions:</b> <ul style="list-style-type: none"> <li>• Unidirectional electronic communication</li> <li>• Bidirectional communication within a single site/provider to provider communication without patient involvement</li> <li>• Evidence of efficacy in telehealth</li> </ul> </li> </ul>
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# Appendix B: Supporting Exhibits

**Exhibit B-1. Summary of Key Policy Provisions<sup>202</sup>**

Policy Theme	Key Policy Provisions	Expansion of Telehealth Services	Key Research and Policy Considerations for Beyond the Pandemic
<b>Regulatory</b>	<ul style="list-style-type: none"> <li>Medicare and Medicaid Section 1135 waivers granted</li> <li>Medicaid Section 1915(c) Waiver Appendix K granted</li> <li>Medicaid Disaster Relief State Plan Amendments (SPA)</li> <li>Expanded eligible providers, patients, services</li> <li>Video requirement waived</li> <li>Telehealth waiver for treatment applied to all diagnoses</li> <li>Pre-existing, established relationship requirement waived</li> <li>Health Insurance Portability and Accountability Act (HIPAA)-compliant platform requirement waived</li> <li>Most states waived out-of-state licensing requirements</li> <li>Parity laws to govern private payer reimbursement of telehealth services</li> </ul>	<ul style="list-style-type: none"> <li>Allowed beneficiaries living in any geographic region to receive telehealth services</li> <li>Allowed patients to access services from home</li> <li>Allowed select services to be delivered via audio-only</li> <li>Allowed Federally Qualified Health Centers (FQHCs) and Rural Health Clinics (RHCs) to serve as “distant site” providers of telehealth to Medicare beneficiaries</li> <li>Allowed for more flexibilities in using telehealth to treat patients with chronic or acute conditions (including COVID-19)</li> <li>Allowed telehealth video-conference visits to be delivered via smart phone devices and through use of platforms like Skype</li> <li>Allowed patients to access care via telephonic or audio-only telemedicine</li> <li>Allowed providers with equivalent licenses to furnish telehealth services across state lines</li> <li>Allowed patients to be seen for new issues that required them to establish new patient/provider relationships</li> </ul>	<ul style="list-style-type: none"> <li>It is unclear which flexibilities introduced in the context of a public health emergency would be appropriate outside of an emergency</li> <li>There is limited evidence on the standard of care providers should be delivering in the context of virtual visits (both video and audio-only)</li> </ul>
<b>Payment</b>	<ul style="list-style-type: none"> <li>Reimbursement rendered similar to in-person services</li> <li>Payment codes added for prolonged, audio-only evaluation</li> <li>Hospitals enabled to bill as originating site</li> </ul>	<ul style="list-style-type: none"> <li>Intended to help providers make up for lost revenue during the public health emergency</li> <li>Facilitated the delivery of telehealth to patients in temporary hospital expansion sites, including to outpatients in their homes</li> </ul>	<ul style="list-style-type: none"> <li>There is limited data on the differences in the intensity of services and effort required to deliver care virtually compared to in-person</li> </ul>
<b>Benefit Design</b>	<ul style="list-style-type: none"> <li>Cost-sharing waived or reduced for care furnished through telehealth</li> </ul>	<ul style="list-style-type: none"> <li>Medicare Advantage plans and many commercial plans waived deductibles, co-pays, co-insurance for telehealth services.</li> </ul>	<ul style="list-style-type: none"> <li>Payers are going to be wary of incentivizing services that may result in unintended consequences</li> </ul>

## Exhibit B-2. Federal Actions Related to Telehealth Coverage<sup>203</sup>

Recently Introduced	
<b>H.R. 8476: The Telehealth Improvement for Kids' Essential Services (TIKES) Act of 2020</b>	<ul style="list-style-type: none"> <li>• Provide states with guidance and strategies to increase telehealth access for Medicaid and Children's Health Insurance Program (CHIP) populations. Guidance and strategies will include: <ul style="list-style-type: none"> <li>• Telehealth delivery of covered services</li> <li>• Recommended voluntary billing codes, modifiers, and place-of-service designations</li> <li>• Simplifications or alignment of provider licensing, credentialing, and enrollment</li> <li>• Existing strategies States can use to integrate telehealth into value-based healthcare models</li> <li>• Examples of States that have used waivers under the Medicaid program to test expanded access to telehealth</li> </ul> </li> <li>• Require a Medicaid and CHIP Payment and Access Commission (MACPAC) study examining data and information on the impact of telehealth on the Medicaid population</li> <li>• Require a Government Accountability Office (GAO) study reviewing coordination among federal agency telehealth policies and examine opportunities for better collaboration, as well as opportunities for telehealth expansion into early care and education settings</li> </ul>
Previously Introduced	
<b>S. 2741: Creating Opportunities Now for Necessary and Effective Care Technologies (CONNECT) for Health Act of 2019</b>	<ul style="list-style-type: none"> <li>• Remove the Medicare geographic restrictions and allow the home to be an originating site for mental telehealth services</li> <li>• Remove the geographic restrictions for certain originating sites for emergency medical care services</li> <li>• Remove the geographic restrictions for federally qualified health centers (FQHCs) and rural health clinics (RHCs) and allow FQHCs and RHCs to furnish telehealth services as distant sites</li> </ul>
<b>S. 3917: Home-Based Telemental Health Care Act of 2020</b>	<ul style="list-style-type: none"> <li>• Establish a grant program for health providers in rural areas to expand telemental health services</li> <li>• Direct HHS secretary to award grants for provision of telemental services in rural areas</li> </ul>
<b>S. 3988: Enhancing Preparedness Through Telehealth Act</b>	<ul style="list-style-type: none"> <li>• Amend the Public Health Service Act with respect to telehealth enhancements for emergency response</li> <li>• Evaluate mechanisms for payment or reimbursement for use of telehealth technologies and personnel during public health emergencies</li> <li>• Evaluate infrastructure and resource needs to ensure providers have the necessary tools, training, and technical assistance to provide telehealth services</li> </ul>
<b>S. 3998: Improving Telehealth for Underserved Communities Act of 2020</b>	<ul style="list-style-type: none"> <li>• Establish payment parity for telehealth services provided to Medicare beneficiaries at RHCs and FQHCs during the COVID-19 pandemic</li> </ul>

Previously Introduced	
S. 3999: <b>Mental and Behavioral Health Connectivity Act</b>	<ul style="list-style-type: none"> <li>• Permanently remove Medicare's geographic restrictions for certain originating sites for emergency medical care services for mental and behavioral health services</li> <li>• Continue eligibility of care for the expanded list of non-physician providers</li> <li>• Allow Medicare to cover audio-only telehealth services</li> </ul>
S. 4039: <b>Telemedicine Everywhere Lifting Everyone's Healthcare Experience and Long Term Health (TELEHEALTH) HSA Act</b>	<ul style="list-style-type: none"> <li>• Permanently extend a provision of the CARES Act that temporarily allows health savings account eligible high-deductible health plans to offer first-dollar coverage of telehealth services</li> </ul>
S. 4103: <b>Telehealth Response for E-Prescribing Addiction Therapy Services (TREATS) Act</b>	<ul style="list-style-type: none"> <li>• Extend ability to prescribe Medication Assisted Therapies (MAT) and other necessary drugs without needing a prior in-person visit</li> <li>• Extend ability to bill Medicare for audio-only telehealth services</li> </ul>
S. 4211: <b>Facilitating Reforms that Offer Necessary Telehealth In Every Rural (FRONTIER) Community Act</b>	<ul style="list-style-type: none"> <li>• Remove geographic barriers for originating site</li> <li>• Expand access to mental health services through telehealth in frontier states</li> <li>• Direct FCC and Department of Agriculture to work with IHS and HRSA to award grants for broadband infrastructure</li> </ul>
S. 4230: <b>Telehealth Expansion Act of 2020</b>	<ul style="list-style-type: none"> <li>• Remove Medicare's geographic restrictions for all evaluation and management (E/M) services</li> <li>• Categorize mental health services as E/M services in order to expand telehealth coverage of mental health services in Medicare</li> </ul>
S. 4318: <b>American Workers, Families, and Employers Assistance Act</b>	<ul style="list-style-type: none"> <li>• Allow (but not require) the HHS Secretary to extend the temporary telehealth flexibilities made available during the public health emergency until December 31, 2021 or until the end of the public health emergency, whichever is later</li> <li>• Require the Medicare Payment Advisory Commission (MedPAC) to provide a report on the impact of telehealth flexibilities on access, quality, and cost by July 1, 2021</li> <li>• Require HHS to post data on use of telehealth throughout the pandemic and provide a report including legislative recommendations to Congress to later than 15 months after the bill is enacted</li> <li>• Extend for five years beyond the end of the public health emergency a provision of the CARES Act which permits FQHCs and RHCs to serve as distant sites for the purposes of delivery telehealth</li> </ul>



Previously Introduced	
S. 4375: <b>Telehealth Modernization Act</b>	<ul style="list-style-type: none"> <li>Remove geographic barriers for originating site</li> <li>Require telehealth services to be covered by Medicare at FQHCs and RHCs</li> <li>Direct HHS to permanently expand the telehealth services covered by Medicare during the public health emergency</li> <li>Require Medicare to cover additional telehealth services for hospice and home dialysis care</li> </ul>
S.4421: <b>Temporary Reciprocity to Ensure Access to Treatment (TREAT) Act</b>	<ul style="list-style-type: none"> <li>Enable healthcare professionals licensed in good standing to care for patients—in-person or through telehealth visits—from any state during this national emergency without jeopardizing their state licensure or facing potential penalties for unauthorized practice of medicine</li> </ul>
S. 4515: <b>Accelerating Connected Care and Education Support Services on the Internet (ACCESS) Act</b>	<ul style="list-style-type: none"> <li>Authorizes \$2 billion in dedicated funding across the government for distance learning and telehealth initiatives, including: <ul style="list-style-type: none"> <li>\$400 million for the Federal Communications Commission (FCC) COVID-19 Telehealth Program, including a 20% set aside for small, rural providers that may have been left out of the competitive first round of telehealth funding</li> <li>\$100 million for the Department of Veterans Affairs (VA) Telehealth and Connected Care Services for the provision of Internet-connected devices and services for veterans in rural, unserved areas</li> </ul> </li> </ul>
H.R. 3228: <b>VA Mission Telehealth Clarification Act</b>	<ul style="list-style-type: none"> <li>Allow trainees satisfying health professional training program requirements to use telehealth systems while supervised by an appropriately credentialed VA staff member</li> </ul>
H.R. 4900: <b>Telehealth Across State Lines Act</b>	<ul style="list-style-type: none"> <li>Establish a uniform standard of nationwide best practices for the provision of telehealth across state lines</li> </ul>
H.R. 5473: <b>EASE Behavioral Health Services Act</b>	<ul style="list-style-type: none"> <li>Codify the removal of geographic restrictions waived in Medicare during the public health emergency</li> <li>Require federal reimbursement of telehealth SUD treatment under Medicaid</li> </ul>
H.R. 6792: <b>Improving Telehealth for Underserved Communities Act of 2020</b>	<ul style="list-style-type: none"> <li>Establish payment parity for telehealth services provided to Medicare beneficiaries at RHCs and FQHCs during the COVID-19 pandemic</li> </ul>
H.R. 7078: <b>Evaluating Disparities and Outcomes of Telehealth During the COVID-19 Emergency Act of 2020</b>	<ul style="list-style-type: none"> <li>Require CMS to study the effects of telehealth changes on Medicare and Medicaid during COVID-19</li> </ul>
H.R. 7187: <b>HEALTH Act</b>	<ul style="list-style-type: none"> <li>Codify Medicare telehealth reimbursement for community health centers and RHCs</li> </ul>

Previously Introduced	
H.R. 7233: <b>Keep Telehealth Options Act</b>	<ul style="list-style-type: none"> <li>Direct the HHS Secretary and the Comptroller General of the United States to conduct studies and report to Congress on actions taken to expand access to telehealth services under the Medicare, Medicaid, and Children's Health Insurance programs during the COVID-19 emergency</li> </ul>
H.R. 7338: <b>Advancing Telehealth Beyond COVID-19</b>	<ul style="list-style-type: none"> <li>Codify the removal of geographic restrictions waived in Medicare during the public health emergency Require telehealth services to be covered by Medicare at FQHCs and RHCs</li> </ul>
H.R. 7388: <b>Advancing Telehealth Beyond COVID-19 Act of 2020</b>	<ul style="list-style-type: none"> <li>Permit the HHS Secretary to waive requirements relating to the furnishing of telehealth services under the Medicare program</li> </ul>
H.R. 7391: <b>Protect Telehealth Access Act</b>	<ul style="list-style-type: none"> <li>Codify the removal of geographic restrictions waived in Medicare during the public health emergency</li> </ul>
H.R. 7663: <b>Protecting Access to Post-COVID-19 Telehealth Act of 2020</b>	<ul style="list-style-type: none"> <li>Eliminate most geographic and originating site restrictions in Medicare and establish the patient's home as an eligible distant site</li> <li>Authorize CMS to continue reimbursement for telehealth for 90 days beyond the end of the public health emergency</li> <li>Allow HHS to expand telehealth in Medicare during all future emergencies</li> <li>Require a study on the use of telehealth during COVID-19</li> </ul>
H.R. 7695: <b>COVID-19 Emergency Telehealth Impact Reporting Act of 2020</b>	<ul style="list-style-type: none"> <li>Require HHS to study telehealth use during the pandemic and impact on care delivery</li> </ul>
H.R. 7992: <b>Telehealth Act</b>	<ul style="list-style-type: none"> <li>Packages nine telehealth bills introduced by Republican lawmakers including: <ul style="list-style-type: none"> <li><a href="#">H.R. 7338</a>: Advancing Telehealth Beyond COVID-19</li> <li><a href="#">H.R. 5473</a>: EASE Behavioral Health Services Act</li> <li><a href="#">S. 4039</a>: Telemedicine Everywhere Lifting Everyone's Healthcare Experience and Long Term Health (TELEHEALTH) HSA Act</li> <li><a href="#">H.R. 3228</a>: VA Mission Telehealth Clarification Act</li> <li><a href="#">H.R. 4900</a>: Telehealth Across State Lines Act</li> <li><a href="#">S. 4103</a>: TREATS Act</li> <li><a href="#">H.R. 7233</a>: Keep Telehealth Options Act</li> <li><a href="#">S. 3988</a>: Enhancing Preparedness Through Telehealth Act</li> <li><a href="#">H.R. 7187</a>: HEALTH Act of 2020</li> </ul> </li> </ul>
H.R. 8156: <b>Ensuring Telehealth Expansion Act of 2020</b>	<ul style="list-style-type: none"> <li>Extend telehealth all provisions in the CARES Act through December 31, 2025</li> <li>Remove geographic barriers for originating site</li> <li>Require payment parity for telehealth services furnished at FQHCs and RHCs</li> </ul>
H.R. 8308: <b>Telehealth Coverage and Payment Parity Act</b>	<ul style="list-style-type: none"> <li>Prohibit restrictions on which conditions can be managed remotely</li> <li>Establish parity between telehealth and in-person visits</li> <li>Guarantee all medically necessary benefits in ERISA plans are covered via telehealth</li> <li>Remove location-based regulations for providers</li> </ul>

Adapted from Manatt. Executive Summary: Tracking Telehealth Changes State-by-State in Response to COVID-19 [internet]. 2020 October 16.

### Exhibit B-3. CMS 2021 Proposal of Addition of Services to Medicare Telehealth Services List<sup>204</sup>

Type of Service	Specific Services
<b>Proposed for permanent addition to list</b>	<ul style="list-style-type: none"> <li>• Group psychotherapy</li> <li>• Domiciliary, Rest home, or Custodial Care Services for established patients (CPT 99334, 99335)</li> <li>• Home visits for established patients (CPT 99347, 99348)</li> <li>• Cognitive Assessment and Care Planning Services</li> <li>• Complex visit due to office/outpatient E/M's</li> <li>• Prolonged Services</li> <li>• Psychological and Neuropsychological Testing</li> </ul>
<b>Proposed for Category 3 as defined above</b>	<ul style="list-style-type: none"> <li>• Domiciliary, Rest home, or Custodial Care Services for established patients (CPT 99336, 99337)</li> <li>• Home visits for established patients (CPT 99349, 99350)</li> <li>• Emergency Department Visits, Levels 1-3</li> <li>• Nursing facilities discharge day management</li> <li>• Psychological and Neuropsychological testing (CPT 96130, 96131)</li> </ul>
<b>Services not proposed but seeking comments regarding addition to Category 3 or permanent addition</b>	<ul style="list-style-type: none"> <li>• Initial nursing facility visits, all levels</li> <li>• Psychological and Neuropsychological Testing</li> <li>• Therapy Services, Physical and Occupational Therapy, all levels</li> <li>• Initial hospital care and hospital discharge day management</li> <li>• Inpatient neonatal and pediatric critical care, initial and subsequent</li> <li>• Initial and continuing neonatal intensive care services</li> <li>• Critical care services</li> <li>• End-stage renal disease monthly capitation payment codes</li> <li>• Radiation Treatment management services</li> <li>• Emergency Department visits, levels 4-5</li> <li>• Domiciliary, Rest Home, or Custodial Care Services, new patients</li> <li>• Home visits, new patients, all levels</li> <li>• Initial and subsequent observation and observation discharge day management</li> </ul>

Source: Healthcare Financial Management Association, 2020.

#### Exhibit B-4. Telehealth Changes under Medicaid Waivers<sup>205</sup>

SPA and Other Administrative Actions to Address COVID-19	
<ul style="list-style-type: none"> <li>• State Medicaid program has issued guidance to expand coverage and/or access to telehealth (51 states)</li> <li>• Medicaid has payment parity for at least some telehealth services compared to face to face services (43 states)</li> <li>• State has issued guidance to waive or lower telehealth copayments (20 states)</li> <li>• State has introduced licensure flexibility (50 states + D.C.)</li> </ul>	
Section 1135 Waivers	
<ul style="list-style-type: none"> <li>• Waive certain provider screening requirements (50 states + D.C.)</li> <li>• Allow out-of-state providers with equivalent licensing in another (50 states + D.C.)</li> <li>• Permit out-of-state providers to provide care to emergency state's Medicaid enrollee (50 states + D.C.)</li> <li>• Allow service provision in alternatives settings, including unlicensed facilities (44 states)</li> <li>• Allow a clinic practitioner's location to be temporarily designated part of the clinic facility so clinic services may be provided (9 states)</li> </ul>	
Section 1915 (c) Waiver Appendix K	
<ul style="list-style-type: none"> <li>• Permit virtual evaluations, assessments, and person-centered planning meetings in lieu of face to face (50 states)</li> <li>• Temporarily modify service scope or coverage (34 states)</li> <li>• Temporarily modify person-centered plan development process and responsible individuals (40 states)</li> <li>• Add electronic method of service delivery to continue services remotely in home (47 states)</li> <li>• Temporarily expand settings where services may be provided (49 states)</li> <li>• Temporarily provide services in out-of-state settings (if not already permitted in waiver) (13 states)</li> </ul>	

Source: Kaiser Family Foundation, Medicaid Emergency Authority Tracker: Approved State Actions to Address COVID-19 [internet]. 2020.

#### Exhibit B-5. Snapshot of Telehealth Services Covered by Commercial Plans<sup>206 207 208</sup>

Payer	Response to the Declaration of a Public Health Emergency
<b>Aetna</b>	Until December 31, 2020, Aetna is waiving member cost-sharing for covered in-network, audiovisual, or audio visits for outpatient and mental health counseling. For general or behavioral health visits, audiovisual modality is required, but for minor acute evaluation and management services, audio visits are allowed. Providers are able to use Teladoc or non-public facing synchronous video chat platforms. Telemedicine services will be reimbursed at in-person office visit rates, with exception of audio-only services. Aetna is also waiving members cost-sharing for all in-network primary care visits for Medicare Advantage plan members, whether in-person or via-telehealth until December 31, 2020.
<b>Anthem</b>	Until December 31, 2020, Anthem will cover telehealth and telephonic-only visits from in-network providers and will waive cost shares for COVID-19 related treatments. Additionally, Anthem will cover telephonic-only visits and waive cost sharing with in-network providers for telehealth visits unrelated to COVID-19 until December 31, 2020. <sup>209</sup>
<b>BCBSA*</b>	For 90 days, beginning March 19, 2020, BCBSA expanded telehealth offerings and provider hotlines, which includes waiving cost-sharing for telehealth services. Additional covered services may be available depending on the state. Since then, several states (BCBS IL, NC, CA, ID, KS, MI, MN, MS, NE, NY, and TN) have extended coverage for telehealth services through December 31, 2020. Waiving of cost sharing based on COVID-19 or non-COVID-19 related services vary by state.

Payer	Response to the Declaration of a Public Health Emergency
<b>Cigna</b>	Until October 31, 2020, Cigna is waiving cost-sharing for audiovisual and audio telehealth visits related to COVID-19, with in-network providers using the virtual vendors Amwell or MDLive. Until December 31, 2020, telehealth visits unrelated to COVID-19 are available, and out-of-pocket costs may apply. Providers will be reimbursed at the in-network or Medicare rates consistent with in-person rates.
<b>Humana</b>	Until December 31, 2020, Humana is waiving member cost-sharing for audiovisual or audio services related to both COVID-19 and non COVID-19 services that are done by participating/in-network providers, including primary care, specialty, and behavioral health. Providers will be reimbursed for audiovisual and audio-only services at the in-network rates consistent with in-person rates.
<b>United Healthcare</b>	Until December 31, 2020, United Healthcare is waiving cost-sharing for audiovisual and audio-only visits that are done with in-network providers for COVID-19-related visits. Waiving cost-sharing for COVID-19 related visits until December 31, 2020. For physical, occupational, or speech therapy; and chiropractic, home health, and hospice visits, services must be conducted with an audiovisual modality. Technologies include publicly available platforms or telehealth applications (e.g., FaceTime, Skype, Zoom). Additionally, urgent care virtual visits are available through Teladoc, Amwell, Doctor on Demand, and others. Services must be provided through live and interactive modalities, to be reimbursed based on national determinations and contracted rates.

Adapted from Office of Health Policy of the Assistant Secretary for Planning and Evaluation, NORC at the University of Chicago [internet]. Environmental Scan on Telehealth in the Context of Alternative Payment Models (APMs) and Physician-Focused Payment Models (PFPs); 2020 September 9.

\*This includes all independent BCBS companies and BCBS Federal Employee Program (FEP). Insurers have also taken steps to assist providers that are experiencing financial difficulties during the public health emergency, including accelerating payments or making payments on value-based contracts regardless of initial targets.

#### Exhibit B-6. Emergency Department Applications for Telemedicine<sup>210</sup>

Location	Applications
<b>Triage</b>	1. Initial intake
	2. Entirety of physician interaction with lowest acuity patients
	3. Disposition planning and result discussion
<b>Supervision of residents or advanced practice providers</b>	1. Discussion of patient care plans
	2. Direct patient contact
	3. Supervision of low risk procedures
	4. Disposition planning
<b>Respiratory isolation area</b>	1. Initial patient evaluation
	2. Healthcare workers with mild illness
	3. Supervision of non-emergentologists
	4. Reassessment of patients
	5. Disposition planning

Adapted from Hamm JM, et al. Telemedicine in the emergency department in the era of COVID-19: front-line experiences from 2 institutions. JACEP Open. 2020 July 28;1–8.

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