

Telemedicine in Oncology and Reimbursement Policy During COVID-19 and Beyond

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ABSTRACT

The first confirmed case of coronavirus disease 2019 (COVID-19) in the United States was reported on January 20, 2020. As of September 17, 2020, there were more than 6.6 million confirmed cases and 196,277 deaths. Limited data are available on outcomes of immunocompromised patients, but early published reports from China indicate that those with cancer have a 3.5 times higher risk of ICU admission, mechanical ventilation, or death than those without cancer. Because of the uncertain behavior of COVID-19, it has become imperative for practices to limit exposure to vulnerable patients. Telemedicine has been one of the cornerstones of caring for patients with cancer during the COVID-19 pandemic. This review provides an overview of reimbursement policy by public and private payers before and during the COVID-19 pandemic, describes implications in cancer care, and offers considerations for future reimbursement policy.

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Rapid Implementation of Telemedicine in Oncology Practices

The first confirmed case of coronavirus disease 2019 (COVID-19) in the United States was reported on January 20, 2020.¹ As of September 17, 2020, there were more than 6.6 million confirmed cases and 196,277 deaths.² Limited data are available on outcomes of immunocompromised patients, but early published reports from China indicate that those with cancer have a 3.5 times higher risk of ICU admission, mechanical ventilation, or death than those without cancer.^{3,4} Because of the uncertain behavior of COVID-19, it has become imperative for practices to limit exposure to vulnerable patients.

Telemedicine has been one of the cornerstones of caring for patients with cancer during the COVID-19 pandemic.⁵⁻⁷ Telemedicine is commonly associated with video and/or audio consultations, but it can also include online patient portals, patient wellness apps, remote monitoring, and “store-and-forward” technologies that allow electronic transmission of medical information (ie, digital images, documents) through secure email and do not involve live interaction. This discussion focuses on live audio and/or video technology, because it has most dramatically increased as a result of COVID-19. Literally overnight, health systems and clinicians pivoted their practices from traditional brick-and-mortar clinics to telemedicine utilizing a range of resources from a simple telephone to video/audio platforms that allow clinicians to connect with the patient and family at multiple locations. In response to this need, the Coronavirus Preparedness and Response Supplemental Appropriations Act (CARES) was signed into law on March 6, 2020, and included a provision allowing the Secretary of Health and Human Services (HHS) to waive certain requirements for Medicare telehealth payment that existed prior to the pandemic.

The introduction of telemedicine into cancer care is moving rapidly for all stakeholders and is likely to play a role in future clinical practice. From a patient perspective, a cancer diagnosis and treatment confer significant indirect expenses,⁸ and telemedicine offers time- and

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cost-saving advantages, including reduced transportation, childcare, and time away from work. In cancer-specific populations, telemedicine has been shown to improve timeliness of diagnosis and treatment, access to care, and patient convenience.⁹⁻¹¹ However, cited challenges include cost and access to technology, legal concerns related to the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and/or liability, regulatory requirements, interference with the patient–oncologist relationship, and, importantly, reimbursement concerns.¹² Although expanded coverage and reimbursement for telemedicine has been instituted during the current public health emergency, it remains unclear what policies will persist after this immediate crisis has subsided. For telemedicine to remain a viable component of cancer care beyond the pandemic, adequate and sustainable coverage and reimbursement policy will be necessary. This review provides an overview of reimbursement policy by public and private payers before and during the COVID-19 pandemic, describes implications in cancer care, and offers considerations for future reimbursement policy.

Reimbursement Overview for Telemedicine by Public and Private Payers Before and During COVID-19

Levels of Reimbursement Policy Regulation for Public and Private Payers

As the COVID-19 pandemic evolves rapidly, so has the guidance for coverage of telemedicine services. Insurance regulation has historically been controlled at the state level, but there are many areas where federal mandates supersede state laws (Table 1). Understanding the differing scopes of state versus federal policy is important to ensure that all insurance types have equitable policies.

Medicare is government-funded and regulated at the federal level. Private health insurance is administered through a group (employer-based) or nongroup (individual) market. Employer-based health insurance plans that are “self-insured” (also referred to as “self-funded”) require the employer to pay directly into a plan that pays the benefit claims instead of using an insurance company, and a third party administers these plans. Self-insured plans are regulated at the federal level by the Employee Retirement Income Security Act (ERISA), which sets minimum standards for health coverage. In 2019, 61% of covered workers, including 17% of covered workers in small firms and 80% in large firms, were enrolled in plans that were either partially or completely self-funded.¹³ Employer-based health insurance plans that are “fully insured” require the employers to purchase healthcare coverage for their employees from an insurance company and pay a premium each year for

that coverage. These plans are regulated at the state level. A major limitation of a state law is their narrow scope, because they affect only fully insured private insurance plans and state public plans (ie, Medicaid and state employee plans); self-insured and Medicare plans are not required to comply.

Medicare Telemedicine Policy: Before and During COVID-19

Prior to the pandemic, Medicare approached telehealth almost exclusively as a tool for rural areas, and only narrow geographic areas were eligible to use telehealth. The patient’s geographic location was required to be in a Health Professional Shortage Area (HPSA) as defined by Health Resources and Services Administration (HRSA), or in a county outside of any Metropolitan Statistical Area (MSA) as defined by the US Census Bureau. In addition, the telemedicine service was required to be delivered to the patient at an eligible facility, which is limited to a provider office, hospital, critical access hospital, rural health clinic, federally qualified health center, skilled nursing facility, community mental health center, or hospital-based/critical access hospital-based renal dialysis center. Although telemedicine has been recognized in the literature as a potential opportunity,¹⁴ it has played a negligible role in most oncology practices, partly due to coverage eligibility restrictions.

Based on new waiver authority included in the CARES Act,^{15,16} the Secretary of HHS has waived certain restrictions on Medicare coverage of telehealth services for traditional Medicare beneficiaries during the COVID-19 public health emergency, effective for services starting on March 6, 2020, and continuing until resolution of the public health emergency. During the pandemic, Medicare expanded the list of eligible services, providers, geographic locations, and mode of telemedicine to include audio-only communication. For oncology practices, the combination of restrictions being lifted and the need to protect vulnerable patients has prompted rapid implementation. Table 2 provides a summary of telemedicine policy before and during COVID-19.

Medicaid and Private Insurance Reimbursement for Telemedicine Before and During COVID-19

Telemedicine reimbursement policies vary from state to state in the Medicaid and private (individual and fully funded) market.

If the state Medicaid program has managed care, telemedicine reimbursement can even vary from plan to plan. Prior to the provisions of the CARES Act, some key Medicaid coverage points included:

Table 1. Insurance Types and Level of Regulation

Type of Plan	Who It Covers	Percentage of US Population Covered	Federal Versus State Regulated
Medicare	Individuals aged ≥ 65 years Certain younger people with disabilities Patients with end-stage renal disease	14% ^a	Federal
Private: group market Self-insured Fully insured	Self-insured: employer (usually larger) operates their own health plan. They may use a private insurance carrier to administer plan, but financial risk/gain is maintained with the employer	49%	Federal
	Fully insured: employer (usually smaller) pays an insurance carrier to both assume legal/financial risk and to administer plan		State
Private: nongroup (individual) market	Individuals and/or family purchase if not eligible for public programs and do not have the option to purchase adequate health insurance from their employer because they are unemployed, self-employed, or their employer does not offer it	6%	State ^a Federally, ACA has regulations to ensure affordability and access
State employee health benefit plans	Employees of the state (eg, teacher, police)	NA	State
Medicaid	Low-income families, qualified pregnant women and children, and individuals receiving Supplemental Security Income are examples of mandatory eligibility groups, ^b but states can opt to include additional groups	20% ^a	Both state and federally funded but state regulated

Data from 2018 Kaiser Family Foundation Health Facts Data. Accessed June 29, 2020. Available at: <https://www.kff.org/other/state-indicator/total-population>.

Abbreviations: ACA, Affordable Care Act; NA, not available.

^aIndividuals who are "dual eligible," meaning they have both Medicaid and Medicare coverage, are categorized as Medicaid.

^bEligible groups found at <https://www.medicaid.gov/sites/default/files/2019-12/list-of-eligibility-groups.pdf>.

- Fifty states and Washington, DC, provide reimbursement for some form of live video in Medicaid fee-for-service
- Fourteen states provide reimbursement for store-and-forward (AK, AZ, CA, CT, GA, MD, MN, NV, NM, NY, TN, TX, VA, and WA)
- Four additional jurisdictions (HI, MS, NH, and NJ) have laws requiring Medicaid reimburse for store-and-forward but, as of the creation of this edition, are yet to have any official Medicaid policy indicating this is occurring
- Twenty-two state Medicaid programs provide reimbursement for remote patient monitoring
- Two Medicaid programs (HI and NJ) have laws requiring Medicaid reimburse for remote patient monitoring
- Twenty-three states limit the type of facility that can serve as an originating site
- Thirty-four state Medicaid programs offer a transmission or facility fee when telehealth is used

Prior to COVID-19, The Kaiser Family Foundation's 2019 Employer Health Benefit Survey reported that large employers offering telehealth benefits increased from 27% to 82% from 2015 to 2019. The largest employers, those with $\geq 5,000$ workers, are the most likely to cover telemedicine (90%), whereas smaller firms, those with 50 to 199 workers, are least likely (65%). In addition, 40 states and Washington, DC, currently have a law that governs private payer telehealth reimbursement policy. Despite high levels of coverage in the private market, in 2018 only

2.4% of large group enrollees who had an outpatient office visit had at least one telemedicine visit.¹⁷

As a result of COVID-19, many states and private payers have acted to remove policy barriers to telehealth utilization, such as allowing for telephone visits, expanded covered services, no geographic location restrictions for the patient, and expansion of the originating site that will be eligible for a facility fee. A full list of state laws is on the Center for Connected Health Policy (CCHP) (<https://www.cchpca.org/resources/covid-19-related-state-actions>). A tool kit was also published by the Centers for Medicare and Medicaid Services (CMS; <https://www.medicaid.gov/medicaid/benefits/downloads/medicaid-chip-telehealth-toolkit.pdf>). America's Health Insurance Plans (AHIP) has compiled a list of private payer telemedicine policy changes as a result of COVID-19 (<https://www.ahip.org/health-insurance-providers-respond-to-coronavirus-covid-19/#B>).

Considerations for Future Telemedicine Reimbursement Policy Development

Evidence on Impact, Outcomes, and Implementation Best Practices Are Needed to Support Reimbursement Policy

During the COVID-19 pandemic, many oncology practices have developed internal processes for implementation of telemedicine, and further systematic guidance for rapid implementation has recently been published.¹⁸ In addition, CMS has responded by expanding guidance and reimbursement for non-face-to-face encounters in the management of patients; however, it is unclear how

Table 2. Summary of Pre- and Post-COVID-19 Medicare Policy and Implications for Oncology Practices

Medicare Policy	Pre-COVID-19	Modification Due to COVID-19	Implications for Practices
Reimbursement	Specific CPT codes approved for reimbursement Limited to established patients	Medicare expanded the list of eligible services and includes non-COVID-19 issues paid at same rate as in-person ^a New and established patients	Billing staff must incorporate new codes and audit documentation to qualify for reimbursement
Out-of-pocket costs	Same amount as in-person service	Increased flexibility to reduce or waive patient cost No cost-sharing for COVID-19 testing-related services (eg, test, associated clinician, emergency department visit)	Patients must be informed that telemedicine visits are billed for non-COVID-19 issues
Eligible providers	Limited types of providers ^b Excludes FQHC/RHC	Added FQHCs/RHCs, physical/occupational therapists, and speech language pathologists	Administrative and technology capacity needs to be built
Location of patient	Originating site (patient's geographic location) must be in an HPSA or a county that is outside an MSA Patient receives telemedicine service at an eligible facility ^c	Site limitations are removed (can be at home)	Assess patient access to phone/video and broadband connection
Location of clinician	Limited number of facility types ^c	Site limitations are removed (can be at home)	Assess clinician workspace/equipment
Modality of telemedicine	Audio/Video only Store-and-forward ^d prohibited HIPAA regulates platform	Audio only ^e or audio/video Store-and-forward ^d prohibited HIPAA rules regarding the platform not enforced	Assess access to phone/video HIPAA-compliant platforms Scheduling systems to incorporate new visit type Patient education on how to use technology
Other additions	In-person requirement waived for nursing home and hospice eligibility during emergency		

Abbreviations: CMS, Centers for Medicare and Medicaid Services; CPT, Current Procedural Terminology; HPSA, Health Professional Shortage Area; OIG, Office of Inspector General; FQHC, federally qualified health centers; MSA, Metropolitan Statistical Area; RHC, rural health clinics.

^aA list of telehealth services is available at: <https://www.cms.gov/Medicare/Medicare-General-Information/Telehealth/Telehealth-Codes>.

^bPhysicians, nurse practitioners, physician assistants, nurse midwives, clinical nurse specialists, certified registered nurse anesthetists, clinical psychologists and clinical social workers, and registered dietitians or nutritionists.

^cSee the Medicare Telehealth Payment Eligibility Analyzer, available at: <https://data.hrsa.gov/tools/medicare/telehealth>.

^dTechnologies that allow for the electronic transmission of medical information (eg, digital images, documents) through secure email communication and do not involve live interaction.

^eCMS Interim Final Rule from March 31, 2020 states codes are covered and can be billed retroactively from March 1, 2020. Accessed on September 17, 2020. Available at: <https://www.cms.gov/files/document/covid-medicare-and-medicaid-iff2.pdf>

long these reimbursement provisions will continue. For successful long-term implementation of telemedicine in oncology and sustainable reimbursement from public and private payers, evidence must be compiled to assure that new models do not sacrifice quality or cause harm to patients. Professional and patient cancer organizations should take the lead to propose cancer-specific metrics and gather data on clinician and patient perspectives surrounding telemedicine so our collective experiences and “lessons learned” are reflected in future policy changes. It is critical that policy incorporate elements of telemedicine that improve patient care outcomes and abandon elements that either harm patients, health systems, and/or clinicians, or widen disparities.

Access to Technology and Infrastructure for Telemedicine

Current telemedicine reimbursement policies allow both audio and video telecommunication systems that permit real-time communication. An assessment of technology capacity for both clinicians and patients is necessary to better understand if this requirement widens disparities.

Within the context of social determinants of health, there are factors that contribute to increased access barriers to telemedicine. Patients may live in a build environment that lacks broadband internet or has limited access to free public internet (eg, libraries). There is variability in digital technology literacy and education regarding changes in technology. Economic or housing instability can lead to inability to purchase and maintain devices or afford devices that have the capacity to work with proposed programs.^{19–21} In addition, cultural expectations regarding use of telemedicine or telemonitoring, including mistrust of either technology or the medical community,²² may impact patient engagement with telemedicine.^{23,24} For most communities, the use of smartphones is widespread; however, disparities exist in some populations, including among individuals aged >65 years, with less than a high school degree, who live in rural areas, and have low income.²⁵ Some patients do not have access to a smartphone or computer with video or affordable monthly data plans. Patients with cancer may be at particular risk of underutilizing technology because the mean age at diagnosis is 66 years²⁶; there is a high prevalence of multiple comorbidities²⁷; and they may be

receiving therapies that impact their physical functioning (eg, neuropathy, fatigue, cognitive dysfunction).

From a health system and clinician perspective, considerable investments in technology were made after the Patient Protection and Affordable Care Act (PPACA) mandate for electronic medical records. Despite these investments, many may not have the resources, facilities, or staffing to further invest in creating HIPAA-compliant video capacity to handle the demands of telemedicine (eg integration with electronic medical records, screensharing capability). Clinicians may need equipment such as headsets and video-equipped computers/tablets as well as a physical location to conduct these visits. Further evaluation is needed to better understand what additional resources would be necessary for health systems and clinics to provide both audio and video, and reimbursement should reflect this capacity.

Under, Over, and Optimal Utilization

Data exist suggesting that expensive services such as emergency departments (EDs) are overutilized, and strategies to promote prevention and screening services are underutilized.^{28–31} A key attraction of telehealth for health plans and employers is the potential savings involved in replacing physician office and ED visits with less expensive virtual visits. This could be especially salient in situations where it may not be necessary for a patient to be evaluated face-to-face, such as oral chemotherapy toxicity checks, survivorship education and surveillance, and genetics assessment. However, increased convenience may tap into unmet demand for healthcare, and new utilization may increase overall healthcare spending. This was demonstrated in a study of >300,000 commercial claims from 2011 through 2013 that explored patterns of utilization and spending for acute respiratory illnesses. The investigators estimated that 12% of telehealth visits replaced visits to other providers, and 88% represented new utilization. Net annual spending on acute respiratory illness increased \$45 per telehealth user.³² Overutilization may be prompted either from patient demand or provider demand as a result of misaligned financial incentives in a fee-for-service environment.³³ Because of the risk for perverse financial incentives for clinicians, telemedicine should optimally be within payment models that align payment with value-based outcomes instead of fee-for-service. Providers' financial incentives must be aligned with telemedicine in order to produce desired outcomes. It will be important to evaluate telemedicine services over time with meaningful metrics, such as ED utilization and hospitalization, use of prevention and screening services, and patient expectations and acceptance of telemedicine interventions.

In addition, incorporation of telemedicine into clinical guidelines (eg, NCCN, ASCO) will help standardize and minimize overutilization or underutilization, define optimal utilization, and encourage payers to cover services deemed appropriate.

Telemedicine Offers Access to Supportive Oncology Services

Supportive oncology services are an established and essential component of cancer treatment, and are recommended in guidelines^{34–36} and required by accreditation bodies.^{37,38} These services can include social work, nutrition, physical therapy, navigators, spiritual care, financial counseling, palliative care, psychology, and psychiatry. Significant barriers, however, prevent consistent availability and delivery of supportive oncology services, including insufficient fee-for-service reimbursement and the lack of available specialists and staff. With the pervasive trend toward alternative payment models, value-based care, and now telemedicine, the inclusion of comprehensive supportive oncology care in emerging payment structures becomes particularly important for sustaining quality of cancer care. As the oncology community compiles data on our experiences with telemedicine, we urge data collection in not only billable clinician encounters (eg, claims data) but also the “unbillable” work performed by nurses and supportive oncology team members to determine whether telemedicine could offer increased access to these essential services. Telemedicine could enable a more efficient delivery of supportive oncology services; however, sustainability of this approach would rely on adequate reimbursement.

Clinical Trials

Cancer clinical trials establish the evidence base for clinical practice; however, fewer than 1 in 20 adult patients with cancer enroll.³⁹ Barriers to clinical trial participation are multifactorial, and include those limiting access, such as transportation, travel costs, and availability of child care.³⁹ In addition, mistrust of research and the medical community are important reasons for lack of participation, especially among racial/ethnic minorities.^{40–42} The mistrust of technology, research, and the medical community also presents challenges to the use of telemedicine in clinical research.

Interest has been shown in virtual trials (also referred to as *decentralized trials*, *remote trials*, *direct-to-patient trials*, and *hybrid trials*) to potentially help widen the pool of trial participants, increase retention, improve the quality of data, and improve the overall patient experience.^{43–45} During COVID-19, the FDA

issued guidance on conducting aspects of ongoing clinical trials with virtual assessments.⁴⁶ Efficiency, cost, and patient safety may be enhanced by participant assessments via telemedicine. Clinical trial design and infrastructure should integrate aspects of telemedicine and include evaluation of this new element of care delivery.

Patients in Rural Health Settings

Patients in rural settings are especially vulnerable to access challenges and are therefore underrepresented in most studies. As long as there are sufficient technologic resources available (eg, video capability, broadband internet access), telemedicine may overcome these barriers and has been shown to be acceptable to both patients and clinicians.^{47–50} Research suggests that once treatment has concluded, rural survivors can receive effective supportive care in or near their homes via telemedicine, reducing the need to travel long distances.^{51–53} CMS has reimbursed for telemedicine services since 1998; however, these reimbursements have been limited by the restriction that the Medicare beneficiary be located in a rural HPSA or county outside of an MSA. These geographic restrictions have been lifted with COVID-19, and future policy should carefully consider expanding or even abandoning geographic location restrictions in some cases, such as when enrolled in a clinical trial or when patients seek a second opinion.

Research Agenda and Policy Recommendations

From traditional scientific standards, research is moving fast to understand the epidemiology of COVID-19 and develop diagnostic and therapeutic options. Out of necessity, cancer care delivery utilizing telemedicine has also evolved rapidly, and more robust research is needed to study this unexpected natural experiment to guide future research and policy agendas. Development and standardizing of oncology-specific metrics for telemedicine can leverage existing work by the National Quality Forum (NQF). In 2017, NQF published a telehealth framework that reviewed existing and future telemedicine metrics and proposed measures with the

following 6 domains: travel, timeliness of care, actionable information, added value of telehealth to provide evidence-based best practices, patient empowerment, and care coordination.⁵⁴ Additional cancer-specific measures could help evaluate whether telemedicine is a more efficient method of delivering comprehensive supportive oncology services such as social work, nutrition, navigation, and psychology. Accreditation and/or certification bodies such as ASCO Quality Oncology Practice Initiative (QOPI) and the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) could help collect data to understand patterns of access and outcomes related to telemedicine. Based on these data, guidelines can be developed to define appropriate settings for telemedicine.

Conclusions

As we move forward, thoughtful and evidence-based policy can potentially improve accessibility of medical and supportive oncology services. CMS has responded rapidly to the immediate crisis, and many believe that how we practice medicine may be forever changed to include this technology. We should learn from this natural experiment and implement necessary infrastructure to build technology capacity, maintain HIPAA compliance across different platforms, and address reimbursement challenges, including protections against medical billing abuse. For all stakeholders to capitalize on this unplanned opportunity to implement telemedicine, a partnership needs to be created among government agencies, clinicians, researchers, patient advocacy groups, and private-sector organizations to rapidly test, evaluate, deploy, and pay for new telemedicine care models.

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