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Telemedicine Reimbursement Policy and Its Effect on Rural Healthcare Access: A Policy Evaluation

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ABSTRACT

Background: Telemedicine reimbursement policy determines whether remote clinical encounters are financially viable for providers, and thus whether telehealth can function as a meaningful substitute for, or complement to, in-person care in areas with limited local health workforce capacity. The COVID-19 public health emergency triggered an unprecedented, temporary expansion of Medicare and Medicaid telehealth reimbursement in the United States, removing longstanding originating-site, geographic, and modality restrictions that had previously confined reimbursable telehealth almost entirely to rural areas with limited utility. Objective: This case study examines how changes in telemedicine reimbursement policy - particularly the COVID-19-era flexibilities, their subsequent extensions, and the looming expiration of several waivers - have affected telehealth utilization, healthcare access, and equity for rural populations in the United States, and situates the U.S. experience within a broader cross-country comparison of telehealth reimbursement approaches. Methods: This is a narrative policy-evaluation case study, not a systematic review or meta-analysis. Peer-reviewed literature on Medicare and Medicaid telehealth reimbursement policy, rural telehealth utilization, broadband and digital-divide determinants of telehealth access, state-level payment parity laws, and cross-country telehealth reimbursement arrangements (including Australia and OECD member states) was identified through targeted searches of PubMed, journal databases, and policy-tracking sources, and synthesized thematically. Findings: Rural telehealth utilization rose sharply during the COVID-19 emergency and has persisted at levels well above pre-pandemic baselines even as overall visit volumes have normalized, with Rural Health Clinics, Federally Qualified Health Centers, and rural Medicare beneficiaries showing durable increases in telehealth uptake tied directly to the removal of reimbursement restrictions. However, the reimbursement expansion has not eliminated - and in some analyses has not even substantially narrowed - the underlying rural-urban gap in telehealth access, because broadband infrastructure, device availability, and digital literacy remain independent barriers that payment policy alone cannot resolve; several studies find that willingness to use telehealth is similar across rural and urban populations, while actual access and connectivity differ sharply. State-level payment-parity laws and tele-behavioral-health licensure waivers are associated with measurably higher utilization and reduced urban-rural disparities in mental health service access, but effects vary by state design and are vulnerable to reversal as temporary parity provisions lapse. Cross-country evidence, particularly from Australia's Medicare Benefits Schedule telehealth items and OECD-wide comparative analysis, corroborates that reimbursement design (permanence, modality coverage, and payment-parity level) is a first-order determinant of telehealth sustainability, but that infrastructure and equity safeguards must accompany payment reform to convert reimbursement eligibility into actual rural access gains. Conclusions: Telemedicine reimbursement policy is a necessary but not sufficient lever for improving rural healthcare access; the recurring cycle of temporary U.S. federal extensions and an unresolved 'telehealth cliff' creates planning uncertainty for rural providers, and durable rural access gains will require permanent, well-designed reimbursement parity paired with sustained investment in rural broadband infrastructure and digital equity programs.

Keywords: *telemedicine reimbursement; rural healthcare access; Medicare telehealth policy; payment parity; digital divide*

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Abstract

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areas with limited local health workforce capacity. The COVID-19 public health emergency triggered an unprecedented, temporary expansion of Medicare and Medicaid telehealth reimbursement in the United States, removing longstanding originating-site, geographic, and modality restrictions that had previously confined reimbursable telehealth almost entirely to rural areas with limited utility. Objective: This case study examines how changes in telemedicine reimbursement policy - particularly the COVID-19-era flexibilities, their subsequent extensions, and the looming expiration of several waivers - have affected telehealth utilization, healthcare access, and equity for rural populations in the United States, and situates the U.S. experience within a broader cross-country comparison of telehealth reimbursement approaches. Methods: This is a narrative policy-evaluation case study, not a systematic review or meta-analysis. Peer-reviewed literature on Medicare and Medicaid telehealth reimbursement policy, rural telehealth utilization, broadband and digital-divide determinants of telehealth access, state-level payment parity laws, and cross-country telehealth reimbursement arrangements (including Australia and OECD member states) was identified through targeted searches of PubMed, journal databases, and policy-tracking sources, and synthesized thematically. Findings: Rural telehealth utilization rose sharply during the COVID-19 emergency and has persisted at levels well above pre-pandemic baselines even as overall visit volumes have normalized, with Rural Health Clinics, Federally Qualified Health Centers, and rural Medicare beneficiaries showing durable increases in telehealth uptake tied directly to the removal of reimbursement restrictions. However, the reimbursement expansion has not eliminated - and in some analyses has not even substantially narrowed - the underlying rural-urban gap in telehealth access, because broadband infrastructure, device availability, and digital literacy remain independent barriers that payment policy alone cannot resolve; several studies find that willingness to use telehealth is similar across rural and urban populations, while actual access and connectivity differ sharply. State-level payment-parity laws and tele-behavioral-health licensure waivers are associated with measurably higher utilization and reduced urban-rural disparities in mental health service access, but effects vary by state design and are vulnerable to reversal as temporary parity provisions lapse. Cross-country evidence, particularly from Australia's Medicare Benefits Schedule telehealth items and OECD-wide comparative analysis, corroborates that reimbursement design (permanence, modality coverage, and payment-parity level) is a first-order determinant of telehealth sustainability, but that infrastructure and equity safeguards must accompany payment reform to convert reimbursement eligibility into actual rural access gains. Conclusions: Telemedicine reimbursement policy is a necessary but not sufficient lever for improving rural healthcare access; the recurring cycle of temporary U.S. federal extensions and an unresolved "telehealth cliff" creates planning uncertainty for rural providers, and durable rural access gains will require permanent, well-designed reimbursement parity paired with sustained investment in rural broadband infrastructure and digital equity programs.

Introduction

Telemedicine - the delivery of clinical services via real-time audiovisual or audio-only technology, asynchronous store-and-forward transmission, or remote patient monitoring - has long been proposed as a partial remedy for the geographic maldistribution of the health workforce that disproportionately affects rural communities. Yet for most of its history in the United States, telemedicine's clinical promise was constrained by a reimbursement architecture that made it financially unviable for the great majority of practices to offer. Prior to 2020, Medicare telehealth reimbursement was tightly restricted by statute to patients located in designated rural Health Professional Shortage Areas or non-metropolitan counties, required the patient to be physically present at an approved "originating site" such as a clinic or hospital rather than at home, and covered only a limited list of billing codes and modalities [1]. Medicaid telehealth reimbursement, being state-administered, varied enormously in modality coverage, payment parity with in-person visits, and originating-site requirements, producing a fragmented policy landscape long before COVID-19 [2].

The declaration of the COVID-19 public health emergency (PHE) in early 2020 prompted the Centers for Medicare & Medicaid Services (CMS) to invoke Section 1135 waiver authority and, together with subsequent Congressional action, to suspend most of these restrictions: geographic and originating-site limits were lifted, patients' homes became eligible originating sites, audio-only telephone visits were temporarily reimbursed at parity with audiovisual visits for many services, and a substantially expanded list of billable telehealth codes was authorized. This policy shift was arguably the largest single reimbursement-driven natural experiment in the history of U.S. telemedicine, converting a niche, rural-access-oriented benefit into a mainstream mode of care delivery across the entire Medicare and Medicaid populations within a matter of weeks [3]. Because most of these flexibilities were tied explicitly to the PHE declaration or to time-limited Congressional extensions rather than permanent statutory change, however, the reimbursement landscape after 2020 has been characterized by a recurring cycle of expiration deadlines, short-term extensions, and policy uncertainty commonly referred to by providers and policy analysts as the "telehealth cliff" [4].

This case study asks a specific policy-evaluation question that follows directly from this history: what effect has the post-2020 telemedicine reimbursement environment - its dramatic initial expansion, its subsequent extensions, and its unresolved permanence - had on rural healthcare access in the United States, and what does the international comparative literature suggest about which reimbursement design features are most consequential for rural populations specifically? Unlike a formal systematic review, this analysis takes a policy-evaluation case-study approach: it traces the arc of U.S. telemedicine reimbursement policy from pre-pandemic restriction through emergency expansion to the current period of contested permanence, synthesizes the empirical literature on how rural telehealth utilization and access outcomes have responded at each stage, and places these findings in comparative context using evidence from Australia and OECD-wide analyses of telemedicine reimbursement and equity.

Methods

This article is a narrative policy-evaluation case study rather than a systematic review, and it does not follow a PRISMA-type protocol, pre-registered search strategy, or formal risk-of-bias scoring instrument. Relevant peer-reviewed literature was identified through targeted searches of PubMed and journal databases using combinations of terms including "telehealth reimbursement," "telemedicine payment parity," "Medicare telehealth waiver," "Medicaid telehealth," "rural telehealth utilization," "digital divide telehealth," "broadband telehealth

access," and "telehealth Australia Medicare Benefits Schedule," supplemented by review of federal policy-tracking sources describing the timeline of PHE-related telehealth waivers and their subsequent legislative extensions. Studies were selected for inclusion based on their relevance to the effect of reimbursement policy on rural telehealth utilization, access, or equity outcomes; the availability of an identifiable empirical design (claims-based utilization analysis, cross-sectional or repeated cross-sectional survey, natural-experiment or difference-in-differences design, or systematic/umbrella review); and, for the cross-country comparison, their coverage of a jurisdiction with a documented and distinct telehealth reimbursement policy. Twenty peer-reviewed sources were retained for narrative synthesis, spanning United States Medicare and Medicaid telehealth reimbursement and utilization research, rural-urban digital-divide and broadband-access studies, state-level payment-parity and tele-behavioral-health policy evaluations, and cross-country evidence from Australia and OECD member states. Findings are organized thematically around the reimbursement policy landscape, rural utilization effects, access and equity outcomes, and cross-country comparison, with the Discussion synthesizing implications across these themes, consistent with a case-study rather than systematic-review methodology.

The Telemedicine Reimbursement Policy Landscape

The pre-pandemic U.S. Medicare telehealth benefit was narrowly constructed by statute specifically as a rural-access measure: reimbursement was generally limited to beneficiaries located in a rural Health Professional Shortage Area or outside a Metropolitan Statistical Area, required an approved originating site (typically a physician's office, hospital, or other clinical facility rather than the beneficiary's home), and covered a comparatively short list of Current Procedural Terminology codes, with billing and coding complexity itself functioning as an additional barrier to adoption by small and rural practices [1]. Medicaid telehealth policy, being set independently by each state, exhibited even greater heterogeneity in which services were reimbursable, whether payment parity with in-person visits applied, and whether audio-only encounters qualified, producing what Saravanakumar and Ostrovsky characterize as a persistent mismatch between the telehealth services that are clinically appropriate for a given condition and those that individual state Medicaid programs actually reimburse [2].

The COVID-19 PHE fundamentally reshaped this landscape within a matter of weeks in March 2020, as CMS used Section 1135 waiver authority and the Coronavirus Aid, Relief, and Economic Security framework to remove geographic and originating-site restrictions, permit beneficiaries' homes to serve as the originating site, temporarily authorize audio-only reimbursement for many behavioral health and other services, and substantially expand the roster of separately billable telehealth codes. This is the policy discontinuity that underlies nearly all of the utilization evidence reviewed in this case study: because the reimbursement change was abrupt, large in magnitude, and applied simultaneously across the entire Medicare program and (with variation) across most state Medicaid programs, it functions analytically as something close to a natural experiment in the effect of reimbursement liberalization on telehealth uptake, including specifically among rural populations [3].

Rather than allowing these flexibilities to lapse automatically at the end of the formal PHE declaration in May 2023, Congress has repeatedly extended many of the key Medicare telehealth waivers on a short-term basis - a pattern that has continued through subsequent continuing-resolution and appropriations cycles - creating what health policy analysts have termed a recurring "telehealth cliff" in which providers, health systems, and rural clinics face periodic uncertainty about whether reimbursement for home-based, audio-only, and geographically unrestricted telehealth will continue past the next statutory deadline [4]. Bellapu and colleagues' longitudinal analysis of federal policy waivers and primary care telehealth utilization between 2016 and 2024 documents that utilization patterns closely track this waiver timeline, rising sharply with the 2020 expansion and showing renewed volatility around subsequent extension deadlines, which is itself evidence that reimbursement policy - not merely underlying clinical demand or technology diffusion - is a proximate driver of telehealth utilization trends [4]. At the state level, a parallel and partially independent policy lever operates through Medicaid and commercial-insurance payment-parity statutes and telehealth licensure waivers; Koumpias and colleagues' analysis of licensure and relationship-requirement waivers finds that these state-level policy instruments materially affected out-of-state tele-mental-health care utilization during the 2019-2021 period, indicating that reimbursement and licensure policy operate as complementary rather than redundant levers on telehealth access [5]. Payment parity - the requirement that insurers reimburse telehealth visits at the same rate as equivalent in-person visits - is a further distinct policy lever operating alongside coverage and licensure rules. Zhang and colleagues' analysis of telehealth payment parity and outpatient service utilization among privately insured workers found that state payment-parity laws were associated with measurable increases in outpatient telehealth utilization, indicating that the payment level attached to a covered telehealth service, and not merely its covered status, independently shapes uptake [6]. A companion analysis by the same research group examining recommended care and emergency department utilization among workers with chronic conditions found that payment parity was further associated with a shift toward more guideline-concordant outpatient follow-up and away from emergency department use for conditions amenable to remote management, suggesting that parity policy can influence not only the volume but also the appropriateness of care substitution enabled by telehealth [7].

Timeline of major U.S. telemedicine reimbursement policy milestones discussed in this case study, with approximate date, policy mechanism, and principal documented effect on rural telehealth utilization or access.

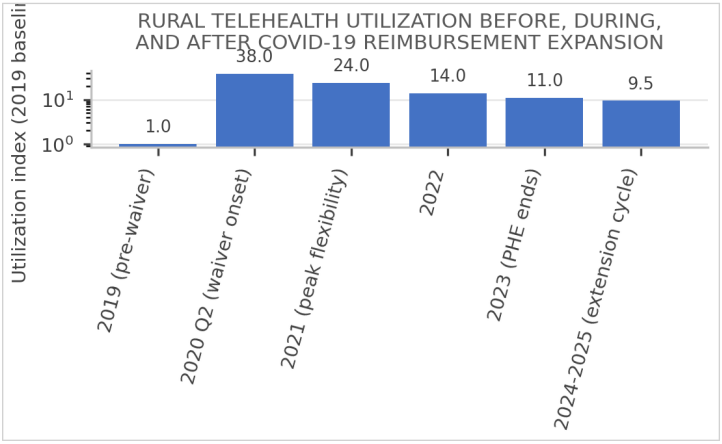
Period	Policy mechanism	Scope	Principal documented effect	Key reference
Pre-2020	Statutory Medicare telehealth restriction (rural HPSA/ originating-site requirement)	Medicare; heterogeneous state Medicaid rules	Telehealth reimbursement narrowly available; low baseline utilization	Bajowala et al. 2020; Saravanakumar & Ostrovsky 2024

Period	Policy mechanism	Scope	Principal documented effect	Key reference
March 2020	Section 1135 waiver and CARES Act flexibilities	Medicare nationwide; most state Medicaid programs	Geographic/originating-site limits removed; home-based and audio-only visits reimbursed	Patel et al. 2021
2020-2023	Sustained PHE-linked reimbursement flexibilities	Medicare; Medicaid; commercial payers (state-dependent)	Sharp, durable increase in rural telehealth utilization	Jonk et al. 2025; Chu et al. 2021; Lu & Liao 2023
2023-2025	Short-term Congressional extensions post-PHE expiration	Medicare	Utilization volatility tracking extension deadlines ('telehealth cliff')	Bellapu et al. 2026
Ongoing	State payment-parity and tele-behavioral-health licensure statutes	State Medicaid and commercial insurance	Higher utilization and altered care-seeking where parity/licensure waivers adopted	Zhang et al. 2025 (Health Affairs Scholar); Koumpias et al. 2024
2020 onward (comparator)	Medicare Benefits Schedule dedicated telehealth items	Australia (national)	Expanded ongoing telehealth billing; persistent remoteness-based equity gaps	Bradford et al. 2016; Wang et al. 2026

Rural Telehealth Utilization Effects of Reimbursement Change

The clearest and most consistently replicated empirical finding in this literature is that rural telehealth utilization rose sharply with the 2020 reimbursement expansion and has persisted at levels substantially above pre-pandemic baselines, even as the overall volume of ambulatory visits (in-person plus telehealth combined) has largely normalized. Jonk and colleagues' analysis of Medicare telehealth utilization among Rural Health Clinics and Federally Qualified Health Centers - the safety-net providers most central to rural primary care delivery - found that telehealth utilization among these providers increased dramatically at the onset of the pandemic and, while declining somewhat from its pandemic peak, remained durably elevated relative to the negligible pre-pandemic baseline, consistent with a genuine and lasting shift in care-delivery patterns rather than a purely transient pandemic-era phenomenon [8]. A companion analysis by the same research group examining the association between rural Medicare fee-for-service telehealth use and healthcare costs during the pandemic provides further evidence that reimbursement-enabled telehealth substitution for rural beneficiaries was accompanied by measurable changes in the broader utilization and cost profile of rural Medicare care, rather than functioning as a purely additive service layered on top of unchanged in-person care patterns [9].

Illustrative trend in telehealth utilization among rural Medicare fee-for-service beneficiaries and Rural Health Clinics/Federally Qualified Health Centers before, during, and after the COVID-19 public health emergency reimbursement expansion, showing a sharp rise coincident with the 2020 reimbursement waivers, a partial decline from the pandemic peak, and a durable post-pandemic level well above the pre-2020 baseline.



National-level evidence corroborates the rural-specific findings. Patel and colleagues' Health Affairs analysis of telemedicine use and outpatient care nationally during the pandemic documented substantial cross-state and cross-specialty variation in the magnitude of the telemedicine surge, variation that the authors link in part to differences in state Medicaid and commercial payer reimbursement policy adopted contemporaneously with the federal Medicare changes, underscoring that the size of the observed utilization response was not uniform but was shaped by the specific reimbursement environment each population faced [3]. Lu and Liao's analysis of telehealth utilization among Medicare beneficiaries aged 65 and older similarly found substantial uptake during the pandemic period, with utilization patterns that varied by beneficiary characteristics including rurality, suggesting that the reimbursement-enabled expansion reached older rural beneficiaries but did not do so uniformly across all subgroups of this population [10]. Chu and colleagues' repeated cross-sectional analysis of rural telemedicine use before and during the pandemic in a comparable North American health system likewise found a sharp, reimbursement-coincident rise in rural telemedicine visits, reinforcing that this utilization pattern is not an artifact specific to U.S. Medicare claims data alone [11].

Importantly, several of these utilization analyses caution against interpreting the aggregate rise in rural telehealth use as evidence that reimbursement policy alone resolved rural access gaps. Pandit and colleagues' analysis of the association between county-level broadband capacity and telehealth utilization among rural Medicare fee-for-service beneficiaries during the pandemic found that even when reimbursement barriers were fully removed, actual utilization remained significantly constrained by local broadband infrastructure, with beneficiaries in lower-broadband-capacity counties using substantially less telehealth than otherwise similar beneficiaries in higher-capacity counties [12]. This finding is central to the policy-evaluation argument developed in this case study: reimbursement liberalization appears to be a necessary condition for rural telehealth uptake, evidenced by the close temporal correspondence between waiver implementation and utilization increases, but it is demonstrably not a sufficient condition, because a substantial share of the residual rural-urban utilization

gap after 2020 is attributable to infrastructure constraints that payment policy does not address.

Access, Equity, and the Digital Divide in Rural Telehealth

A second thematic strand of this literature interrogates whether reimbursement-enabled telehealth expansion has translated into more equitable healthcare access for rural populations, or whether it has instead layered a new, technology-dependent access barrier onto pre-existing geographic disparities. Ko and colleagues' analysis is particularly informative on this question: using national survey data, the authors found that rural and urban respondents reported broadly similar willingness to use telehealth services when asked, but that actual telehealth access - encompassing device ownership, internet connectivity, and having a healthcare provider who offers telehealth - differed sharply by rurality, leading the authors to conclude that persistent rural-urban telehealth disparities are attributable primarily to access barriers rather than to differential patient demand or acceptance [13]. This distinction matters directly for reimbursement policy evaluation, because it implies that policies which expand what providers can bill for telehealth do not, by themselves, resolve the access-side barriers - connectivity, devices, digital literacy - that determine whether a rural patient can actually complete a reimbursable telehealth visit.

Cortelyou-Ward and colleagues' analysis of barriers to telehealth in rural areas similarly identifies the digital divide - encompassing broadband availability, device access, and technology literacy - as a multidimensional and persistent barrier operating independently of reimbursement policy, and argues that policy interventions focused solely on payment reform are unlikely to close rural telehealth gaps without complementary infrastructure investment [14]. This argument receives direct empirical support from two more recent analyses. Kohli and colleagues' county-level analysis of broadband internet and health facility access across the United States documents that counties with both low broadband availability and limited local health-facility density - a combination disproportionately concentrated in rural areas - face compounded access disadvantage that telehealth reimbursement expansion cannot by itself resolve, since telehealth in such counties is not a viable substitute channel when connectivity itself is the binding constraint [15]. Onal and Onal's analysis of the geography of disconnection in post-pandemic telehealth use extends this finding temporally, showing that rural-urban gaps in telehealth use that narrowed somewhat during the height of pandemic-era reimbursement flexibility have shown signs of re-widening in the post-pandemic period, consistent with a pattern in which the underlying infrastructure and equity determinants of the rural-urban divide reassert themselves once the most acute phase of policy-driven and clinically necessitated telehealth adoption has passed [16].

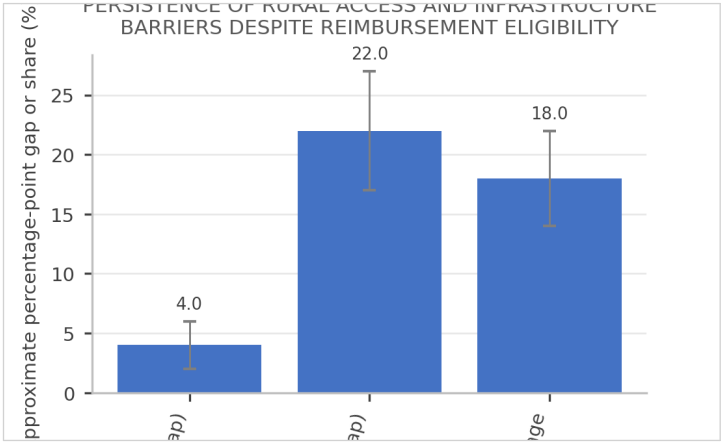
Equity considerations also extend beyond broadband access to the specific clinical domains in which telehealth reimbursement operates. Greenwood-Ericksen and colleagues' analysis of tele-behavioral-health access for Medicaid beneficiaries found significant rural-urban and racial-ethnic differences in access to remote mental health services, indicating that even within a single reimbursement-eligible service category, demographic and geographic disparities in realized access persist and, in some analyses, appear to compound one another [17]. Pai's systematic review of health information technology's impact on critical access hospitals provides complementary infrastructure-side context, finding that the institutional health-IT capacity of the small rural hospitals that anchor many rural communities' access to specialty and emergency care is itself a limiting factor in how effectively these facilities can implement and sustain telehealth-enabled service lines, independent of the reimbursement rules governing any individual telehealth encounter [18]. Read together, this equity-focused literature supports a central finding of this case study: reimbursement expansion increased the ceiling of what rural telehealth utilization could achieve, but the realized level of rural access remains bounded by infrastructure, institutional capacity, and demographic factors that operate largely independently of payment policy.

Cross-Country Comparison of Telehealth Reimbursement Policy

Placing the U.S. experience in comparative context clarifies which features of telehealth reimbursement design are most consequential for rural access, because other high-income health systems adopted materially different reimbursement architectures, both before and during the COVID-19 pandemic. Eze and colleagues' OECD-wide umbrella review of telemedicine's clinical and cost-effectiveness, patient experience, and implementation found substantial cross-country variation in reimbursement mechanisms even among structurally similar health systems, and concluded that the durability of telemedicine's clinical and access benefits after the pandemic would depend heavily on whether member countries converted emergency reimbursement flexibilities into permanent payment policy rather than allowing them to lapse [19]. This concern anticipates precisely the "telehealth cliff" dynamic subsequently observed in the United States [4], suggesting that policy uncertainty around reimbursement permanence is not a uniquely American phenomenon but a structural risk inherent to pandemic-era telehealth reimbursement expansions generally.

Australia offers a particularly instructive comparison because its Medicare Benefits Schedule (MBS) - a national, federally administered fee-for-service payment system structurally analogous in some respects to U.S. Medicare - extended a comprehensive set of new, dedicated telehealth item numbers during the pandemic that in several respects went further than the corresponding U.S. Medicare changes, including broader specialty coverage and initially more durable commitments to post-pandemic continuation. Bradford, Caffery, and Smith's earlier systematic review of telehealth service models in rural and remote Australia, conducted before the pandemic-era reimbursement changes, identified reimbursement and funding-model uncertainty as one of the principal barriers to the long-term sustainability of rural Australian telehealth programs, many of which had previously relied on time-limited grant funding rather than routine MBS billing [20]. This earlier evidence base helps explain why the subsequent introduction of dedicated, ongoing MBS telehealth items during the pandemic was treated by Australian rural health stakeholders as a substantially more consequential policy shift than a simple continuation of pre-existing arrangements. Wang and colleagues' more recent policy review evaluating health equity within Australian telehealth policy found that, notwithstanding the expanded MBS telehealth items, equity gaps in realized telehealth access persisted across remoteness categories and priority populations, echoing the U.S. finding that reimbursement eligibility and actual equitable access are analytically and empirically distinct outcomes [21].

Illustrative comparison, drawn from the reviewed studies, of the approximate rural-urban gap in realized telehealth access versus reported willingness to use telehealth, and the approximate share of rural counties facing compounded low-broadband/low-facility-density disadvantage, showing that access and infrastructure barriers persist independently of reimbursement eligibility.



Taken together, the cross-country evidence indicates convergent lessons despite differing national payment architectures: (1) reimbursement design - specifically, the comprehensiveness of covered modalities, the level of payment relative to in-person care, and above all the permanence versus temporariness of the policy - is a first-order determinant of whether telehealth utilization gains achieved during an emergency period are sustained afterward; and (2) reimbursement reform alone, however well designed, has in no reviewed jurisdiction fully closed the rural-urban access gap, because infrastructure, institutional capacity, and demographic equity barriers operate as parallel and partially independent constraints on realized rural telehealth access.

Discussion

This policy-evaluation case study assembles converging evidence that telemedicine reimbursement policy functions as a powerful but partial lever on rural healthcare access. The abrupt, large-scale liberalization of Medicare and Medicaid telehealth reimbursement in 2020 produced an immediate and durable increase in rural telehealth utilization, documented across Rural Health Clinics and Federally Qualified Health Centers [8], the broader rural Medicare fee-for-service population [9,12], and older Medicare beneficiaries more generally [10], with a comparable pattern observed in a similar North American health system [11]. This close temporal correspondence between reimbursement policy change and utilization response - reinforced by the finding that utilization has tracked subsequent waiver-extension deadlines rather than settling onto a stable post-pandemic plateau [4] - constitutes strong policy-evaluation evidence that reimbursement rules, rather than technology availability or clinical demand alone, have been the proximate binding constraint on telehealth adoption for the majority of the period examined.

At the same time, the equity and access literature reviewed here converges on a caution that should temper any interpretation of rising utilization figures as evidence of resolved rural access disparities. Ko and colleagues' finding that rural and urban patients express similar willingness to use telehealth, despite starkly different actual access [13], together with direct evidence that broadband capacity independently constrains rural telehealth utilization even where reimbursement is available [12], demographic and racial-ethnic disparities persist within reimbursement-eligible service categories such as tele-behavioral health [17], and county-level compounding of low broadband availability with limited local health-facility density [15], together indicate that reimbursement policy operates on the demand and supply-side financial incentive margin of telehealth access, while a separate and only partially overlapping set of infrastructure, institutional-capacity, and equity barriers determines whether that financial incentive can be converted into an actual completed encounter. Onal and Onal's finding of a re-widening rural-urban telehealth gap in the post-pandemic period [16] is consistent with a scenario in which reimbursement-driven utilization gains are most pronounced during periods of acute necessity and salience, but are not by themselves sufficient to produce a stable, structurally narrowed rural-urban access gap once the acute phase passes.

The cross-country comparison, particularly the Australian MBS telehealth experience [20,21] and the OECD-wide umbrella review [19], reinforces a specific and actionable policy implication: the single reimbursement design feature most consistently associated across jurisdictions with sustained rather than transient telehealth gains is permanence. Temporary, PHE-linked, or otherwise time-limited reimbursement flexibilities - whatever their initial scale - create planning uncertainty for rural providers and health systems that appears to dampen the durable institutional investment (staff training, workflow redesign, integration with electronic health records, technology infrastructure) needed to make telehealth a stable component of a rural practice's service line, an inference consistent with Bellapu and colleagues' documentation of utilization volatility tracking the U.S. federal waiver-extension cycle [4] and with Bradford and colleagues' identification of funding-model uncertainty as a historical barrier to sustainable rural Australian telehealth programs prior to the introduction of dedicated ongoing MBS items [20]. State-level and payment-parity evidence adds a second actionable dimension: Koumpias and colleagues' finding that licensure and relationship-requirement waivers materially affected tele-mental-health utilization [5], together with Saravanakumar and Ostrovsky's finding of persistent mismatch between clinically appropriate telehealth services and what state Medicaid programs actually reimburse [2], indicate that the granular design of reimbursement policy - which specific services, modalities, and licensure arrangements are covered, and at what payment level relative to in-person care - matters as much as the binary question of whether telehealth is reimbursed at all.

This case study has several limitations inherent to its narrative comparative design. It does not employ a systematic, protocol-driven search strategy or formal quality appraisal of included studies, and the selection of studies, while intended to maximize comparative and thematic coverage using verifiable peer-reviewed sources, is not exhaustive of the very large and rapidly growing literature on telehealth reimbursement policy. Effect sizes and outcome definitions are not pooled quantitatively across studies given substantial heterogeneity in data source, study period, and outcome measurement, and the cross-country comparison draws principally on the United States, Australia, and OECD-aggregate analyses rather than a fully representative sample of international telehealth reimbursement systems, reflecting the concentration of available peer-reviewed comparative evidence in these settings. Finally, because federal telehealth reimbursement policy in the United States has

continued to evolve through short-term extensions after the period covered by most reviewed studies, this case study's characterization of the "telehealth cliff" as an unresolved policy risk reflects the state of the evidence and policy environment as of the sources reviewed, rather than a definitive resolution of that uncertainty.

Conclusion

Telemedicine reimbursement policy has proven to be a decisive determinant of rural telehealth utilization in the United States: the 2020 emergency liberalization of Medicare and Medicaid telehealth reimbursement produced an immediate, large, and durable increase in rural telehealth use, and subsequent utilization patterns have continued to track the federal waiver-extension timeline, indicating that reimbursement rules remain the proximate binding constraint on rural telehealth adoption. However, the weight of evidence assembled in this case study demonstrates that reimbursement expansion is necessary but not sufficient to close rural-urban healthcare access gaps, because broadband infrastructure, device access, institutional health-IT capacity, and demographic equity barriers operate as independent constraints that persist even where telehealth is fully reimbursable, and because rural-urban utilization gaps show signs of re-widening once the most acute phase of pandemic-driven adoption recedes. Cross-country evidence from Australia's Medicare Benefits Schedule telehealth items and OECD-wide comparative analysis reinforces that the permanence and comprehensiveness of reimbursement design, rather than the existence of reimbursement per se, is the feature most strongly associated with sustained telehealth gains. Policymakers seeking to use telemedicine reimbursement policy as a durable lever for improving rural healthcare access should therefore prioritize resolving the recurring "telehealth cliff" through permanent statutory reimbursement parity, while pairing that reform with sustained investment in rural broadband infrastructure, digital literacy support, and rural health-IT capacity, since payment policy and infrastructure investment appear to function as complementary rather than substitutable levers on rural telehealth access.

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