

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)
)
Promoting Telehealth in Rural America) WC Docket No. 17-310
)

PETITION FOR RECONSIDERATION AND CLARIFICATION

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SUMMARY

The Commission’s Report and Order on Promoting Telehealth in Rural America (*Order*) includes needed improvements to the Rural Health Care (“RHC”) universal service program, especially with respect to program integrity and transparency. Specifically, the Schools, Health & Libraries Broadband (“SHLB”) Coalition supports the Commission’s steps to increase the effectiveness of competitive bidding, including implementing gift rules (Section III.D), to improve program administration (Section III.E.), and to improve the application process and program oversight (Section III.F). SHLB, however, urges the Commission to (1) reconsider the funding prioritization system for when either of the RHC funding caps are exceeded (Section III.B), and (2) the drastic changes to the processes for determining rural and urban rates in the Telecommunications Program (Telecom Program; Section III.A). SHLB also requests clarification or modification of how Medically Underserved Area/Population designations are treated in sparsely populated counties.

The new prioritization regime, which requires funding for non-rural health care providers to be eliminated first when the funding cap is exceeded, appears to be based on erroneous data that overstates the amount of funding going to non-rural providers. In addition, because all non-rural health care providers in the RHC program participate as part of mostly-rural Healthcare Connect Fund (“HCF”) consortia, the new prioritization regime singles out HCF consortium networks to bear the brunt of any cap-driven funding reductions – which in turn will harm the many hundreds of *rural* health care providers that rely on and benefit from consortia participation. This will have dramatic negative impacts on existing consortia and could lead to the abandonment of network facilities funded by the HCF. The new prioritization rules undermine previous Commission efforts to encourage the formation of consortium networks, do not reflect how health care networks are

designed and function, and ignore the important benefits consortia with non-rural participation provide to rural health care providers.

SHLB also urges the Commission to reconsider the fundamental changes the *Order* imposes on the Telecom Program. The *Order* replaces the existing method for identifying rural rates with an unwieldy, arbitrary approach based on tiers that lump together very different areas with highly divergent service-delivery costs. And for both urban and rural rates, the *Order* introduces even more distortion by asking USAC to determine the median among rates for supposedly “similar” services. Many of the *Order*’s guidelines for identifying “similar” services are flawed, however, and in other areas the Commission has failed to establish any guardrails to govern the discretion granted to USAC in carrying out this complex, weighty task. Indeed, the broad delegation to USAC is not only an unwise policy choice, but raises independent legal and transparency concerns. SHLB and other parties in this proceeding have previously raised many foreseeable implementation issues this new system will create; other implementation difficulties are already emerging as program participants try to plan how they will comply with the *Order*’s changes to the Telecom Program.

The Commission should reconsider the *Order*’s massive changes to both the Healthcare Connect Fund and the Telecom Program discussed herein, and failing that, should correct the deficiencies SHLB and others have identified.

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PETITION FOR RECONSIDERATION AND CLARIFICATION

Pursuant to Section 1.429 of the Commission’s Rules,¹ the Schools, Health & Libraries Broadband (“SHLB”) Coalition, a membership organization with a public interest mission, respectfully petitions the Commission to reconsider or clarify certain aspects of its recent RHC program Report and Order and final rules regarding both the Healthcare Connect Fund and the Telecommunications program.² In support thereof, the following is respectfully submitted:

I. INTRODUCTION

The SHLB Coalition’s mission is to promote open, affordable, high-quality broadband for anchor institutions and their communities.³ High capacity broadband is the key infrastructure that health care providers, libraries, K-12 schools, community colleges, colleges and universities, public media and other anchor institutions need for the 21st century. Enhancing the broadband capabilities of these community anchor institutions is especially important to the most vulnerable

¹ 47 C.F.R. § 1.429.

² *Promoting Telehealth in Rural America*, WC Docket No. 17-310, Report and Order, 34 FCC Rcd 7355 (rel. Aug. 20, 2019) (*Order*); 84 Fed. Reg. 54952 (Oct. 11, 2019) (*Rules*).

³ SHLB Coalition members include representatives of health care providers and networks, schools, libraries, state broadband offices, private sector companies, state and national research and education networks, consulting firms, and consumer organizations. See www.shlb.org for a current list of SHLB Coalition members.

segments of our population – those in rural areas, low-income consumers, disabled veterans and elderly persons, students, minorities, and many other disadvantaged members of our society.

SHLB members include many consortia of eligible health care providers participating in the RHC Healthcare Connect Fund (“HCF”), as well as tribal and other health groups participating in the RHC Telecommunications Program (“Telecom Program”). These organizations and entities include or represent small and/or extremely remote rural health providers. As detailed below, the *Order* and *Rules* adopted by the Commission in August 2019 will have substantial negative impacts on RHC program participants, including many rural health care providers, and ultimately rural health care patients. SHLB seeks reconsideration or clarification of the *Order* and *Rules* on behalf of these organizations, groups, and consumers.

II. THE COMMISSION SHOULD RECONSIDER IMPOSING CAP-DRIVEN FUNDING REDUCTIONS PRIMARILY ON CONSORTIA IN THE HEALTHCARE CONNECT FUND

The *Order* adopts a new system for prioritizing limited RHC funding that, in effect, imposes 100 percent of the burden of any RHC funding shortfalls initially on HCF consortia. That is because non-rural health care providers make up the bottom two prioritization tiers established by the *Order* (Tiers 7 and 8), and all non-rural providers in the RHC program are, by rule, part of a majority rural HCF consortium. Put another way, under the new *Rules*, if the overall RHC program cap is exceeded, HCF consortia will suffer substantial funding reductions before any individual health care provider sees a reduction in funding,⁴ negatively affecting rural health care participants in those consortia. This *de facto* discrimination against HCF consortia marks a

⁴ According to data supplied by the Commission, 31% of program funding in 2017 was associated with priority Tiers 7 and 8 (\$118 million/\$380 million). *See Order* ¶ 129, tbl. 3. Because all non-rural health care providers in the RHC program are part of HCF consortia, 100% of the funding in Tiers 7 and 8 goes to consortia. As noted below, SHLB has concerns about the accuracy of this data and believes it may greatly overstate the amount of RHC funding going to non-rural areas.

dramatic but unacknowledged change in Commission policies toward consortia – contradicting the *Order*'s assertion that the new prioritization regime “treat[s] both [the Telecom and HCF] programs equally”.⁵

Requiring HCF consortia to bear the brunt of cap-driven funding reductions will erode the viability of consortia, especially those with shared network services, which will reduce access to reliable, affordable broadband services for rural health care providers. If funding is suddenly reduced or eliminated for non-rural consortia participants, the cost for those shared services will become unpredictable and could balloon, fundamentally changing the economic calculus for consortium participation. This disruption to the consortia model will likely cause declining membership and could force consortia to restructure to reduce or eliminate shared network services by decommissioning previously funded networks. Such impacts will reduce the diverse benefits and services consortia provide to *rural* health care providers (examples of these benefits and services are detailed in Exhibit A) and likely will be inconsistent with Congress's directive that rural health care providers pay rates for telecommunications and advanced services that are comparable to those rates paid by their urban peers.

While the *Order* very briefly acknowledges that *future* consortia participation may be discouraged by the new prioritization regime,⁶ the *Order* does not consider the likely substantial impacts on *existing* consortia. This represents a fundamental misunderstanding of the likely harmful effects of the *Order*, which is a problem in light of long-standing Commission policies

⁵ *Order* ¶ 127. See *Defs. of Wildlife v. Jewell*, 815 F.3d 1, 9 (D.C. Cir. 2016) (“An agency acts arbitrarily or capriciously if it has...entirely failed to consider and important aspect of the problem, or offered an explanation either contrary to the evidence before the agency or so implausible as to not reflect either a difference in view or agency expertise.”) (emphasis added) (citing *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)).

⁶ *Order* ¶ 126.

that recognized the benefits of HCF consortia and promoted their formation and growth. We are filing this Petition in significant part because the Commission appears to have ignored such harms. Before addressing these substantive issues, however, we address concerns about the data on which the Commission apparently justified (at least in part) the new prioritization regime.

A. The Amount of Rural Health Care Funding Expended by Non-Rural Health Care Providers May Be Greatly Overstated

The Commission has an obligation to reconsider policies based on erroneous facts or premises.⁷ The *Order* finds “a significant amount of funding went to sites in non-rural areas as part of [HCF] consortia [in 2017]” and that, under the new prioritization regime, rural sites would now receive this funding if demand exceeds the cap.⁸ SHLB, however, has reason to believe the \$118 million in 2017 funding reported by the Commission as going to sites in non-rural areas⁹ is erroneous and substantially overstated. If SHLB is correct, the burdens of the new approach to consortia will remain – in the form of disruption and uncertainty – but the benefits will be much less than the *Order* presumes.

This Commission previously recognized that USAC data showing “funding attributed to non-rural locations likely is overstated because shared equipment and services often are attributed to non-rural locations even though they are used by all the network sites.”¹⁰ Based on a cursory

⁷ See *American Family Ass’n, Inc. v. FCC*, 365 F.3d 1156, 1166 (D.C. Cir. 2004) (noting Commission “obligation to reevaluate [policy] if the empirical predictions and premises it used to justify the [policy] turn out to be erroneous.”); see also *Ctr. for Auto Safety v. Federal Highway Admin.*, 956 F.2d 309, 314 (D.C. Cir. 1992) (“An agency’s action is arbitrary and capricious if it rests upon a factual premise that is unsupported by substantial evidence. . . .”).

⁸ *Order* ¶ 129, tbl. 3; see also *id.* ¶ 145 (expressing concern that the “level of committed funding to eligible sites in non-rural areas runs counter to the intent of Congress to assist eligible health care providers in rural areas”).

⁹ *Id.* (the total in priority Tiers 7 and 8 in Table 3).

¹⁰ *HCF Order*, 27 FCC Rcd at 16704, n.148.

review of current data available in USAC Open Data, USAC appears to still associate certain types of HCF network shared costs with a single, often non-rural, location in the consortium (*e.g.*, a large hospital or data center). But in actuality, such shared services are used by (or properly attributed to) dozens or perhaps hundreds of health care providers in the consortium, *many if not most of which are rural*.¹¹

For example, if dozens of health care providers in a consortium share a large commodity Internet access service (a highly cost-effective practice), USAC may associate all of the costs for the service with a non-rural location, even though the majority of HCPs utilizing the service are rural. Examples of large consortia with significant shared network services include the New England Telehealth Consortium, OCHIN (Oregon), the California Telehealth Network, and the Utah Telehealth Network.¹² In the case of large consortia, these shared costs can be substantial. The same may also be true for network design and construction costs, where such costs are classified as non-rural simply for administrative convenience.

If current USAC data in fact overstates non-rural expenditures in the RHC, especially if that overstatement is substantial, then the Commission should reconsider any major policy changes based in part on that data.¹³ As discussed further below, eliminating the subsidy for all non-rural consortium participants – as the new prioritization rules provide for – risks substantial impacts to *rural* health care providers.

¹¹ See *Order* ¶ 149, n.449 (noting, *inter alia*, that in funding year 2018 40% of HCF consortia meet or exceed the 75% rural threshold).

¹² Part of the Utah Education and Telehealth Network (“UETN”).

¹³ See *American Family Ass’n, Inc. v. FCC*, 365 F.3d at 1166; see also *Democratic Central Committee v. Washington Metropolitan Transit Area Authority Commission*, 485 F.2d 786, 819-20 (D.C. Cir. 1973) (“To permit an accounting device to dictate the rule of law is to allow the tail to wag the dog. To judicially accept an accounting method without inquiry as to its reasonableness is to pervert the law”).

In addition, it is unclear the Commission considered the way consortia applications are processed and handled by USAC systems, ignoring serious practical challenges USAC will likely face implementing the new prioritization regime as it applies to consortia. First, a consortium funding request may contain hundreds of line items representing various eligible services, with each associated with a different health care provider. Under the new prioritization regime, each health care provider may be treated differently based on its geographic location within the eight priority tiers. When either of the two program caps is exceeded, each of the eight tiers will either get full support, pro-rata support, or zero support. For consortium applications, therefore, each line-item will receive a distinct funding decision based on the priority tier of its associated health care provider – *and all of these line-item decisions will have to occur before USAC can issue the consortium funding commitment*. As a result, one of the principal purported benefits of the new prioritization regime – speeding the issuance of funding commitments¹⁴ – will be inoperative as it relates to HCF consortia. This is yet another way the *Order* fails to consider how HCF consortia will be uniquely burdened under the new prioritization regime.

Second, in cases where consortia shared services are involved, as noted above, such services may be associated with a single non-rural health care provider, even though the services are used consortium-wide. When one of the caps is hit and only non-rural health care providers' funding is cut, in order to ensure that shared services associated with *rural* health care providers *are* funded, USAC will be forced to allocate costs to each individual health care provider in the consortium. There are significant practical reasons USAC has not been able to do this in the past

¹⁴ *Order* ¶ 114.

and it is unclear whether it can be done now.¹⁵ If USAC cannot, it may be impossible to fairly implement the new prioritization scheme as it applies to network shared costs and services.

B. Consortia in the Healthcare Connect Fund Benefit Rural Health Care but Many Need Non-Rural Participation to be Sustainable

The RHC provisions of the Telecommunications Act of 1996 specifically identify health care provider consortia as eligible for funding.¹⁶ In 2006, as part of a pilot designed to inform future RHC reforms, the Commission allowed non-rural health care providers to be eligible for RHC funding if part of a consortia with a non-*de minimis* number of rural health care providers.¹⁷ Based upon a detailed staff evaluation of that pilot,¹⁸ the Commission in 2012 recognized substantial benefits to this new rural/non-rural consortium approach, including: better and more competitive pricing for broadband services;¹⁹ administrative cost savings for both applicants and USAC; better access for rural health care providers to medical specialists at larger non-rural hub hospitals; improved availability to rural health care providers of leadership, administrative, technical, and even financial resources from non-rural hospitals and medical centers;²⁰ and

¹⁵ One major challenge is consortium churn: during the duration of a consortium funding commitment, health care providers close, move (potentially moving into a different rural-MUA/P priority tier), and increase or decrease bandwidth, etc. As allowed under the rules, USAC manages this with site and service substitutions, typically processed retroactively. Allocating consortium shared costs to specific sites is particularly challenging because of churn. Cost allocations for consortium common costs essentially change constantly. For example, a decrease in one site's allocation correspondingly increases each other site's allocation.

¹⁶ See 47 U.S.C. § 254(h)(7)(B)(vii); *Rural Health Care Support Mechanism*, WC Docket No. 02-60, Report and Order, 27 FCC Rcd 16678, 16701, (2012) (*HCF Order*).

¹⁷ See *Rural Health Care Support Mechanism*, WC Docket No. 02-60, Order, 21 FCC Rcd 11111, 11114 (2006).

¹⁸ See *Wireline Competition Bureau Interim Evaluation of Rural Health Care Pilot Program Staff Report*, WC Docket No. 02-60, Staff Report, 27 FCC Rcd 9387 (2012).

¹⁹ See *HCF Order*, 27 FCC Rcd at 16703.

²⁰ *Id.* at 16702. Although not specifically found by the *Pilot Evaluation*, we note this factor reduces the dependence of small health care providers on consultants.

increased efficiency of network design (*e.g.*, not routing a network through rural sites simply to qualify for the RHC subsidy).²¹

Examples of how consortia with non-rural participation are currently benefitting *rural* health care providers include the incentives non-rural consortium participants have to deploy more affordable telemedicine and telehealth programs when they have access to a large number of rural health care providers through a consortium. Rural health care providers are benefitting from the increased availability of these programs, lower costs made possible through economies of scale (as well as lower broadband prices), and the ease with which these services are accessed. Rural providers are also benefitting from increased competition among non-rural providers because consortia typically offer private, secure, quality of service access to more than one provider of telemedicine and telehealth services. Consortia that deliver specific benefits to rural participants are generally funded through participation fees. These fees are typically higher for larger (usually non-rural) participants, which also benefits rural participants – but a critical mass of participation by both rural and non-rural is needed for this model to be successful.

The Commission created the HCF to continue to leverage the recognized benefits provided by consortium-based regional health care networks for rural health care providers.²² Although the Commission in the *HCF Order* continued to allow non-rural health care providers to be eligible as part of a consortia, it tightened the requirements by requiring consortia to be *majority* rural rather than simply *non-de minimis*.²³ The *Order* makes incremental adjustments to this requirement by requiring further increases in minimum rural participation in years that the RHC cap is exceeded.

²¹ *Id.* at 16702-03, n.137.

²² *See id.* at 16699.

²³ *Id.* at 16707; *see also id.* at 16705 (“the language in section 254(h)(2)(A) demonstrates Congress’s intent to authorize expanding support of ‘advanced services,’ when possible, for non-rural health providers.”) (citing *Texas Office of Public Utility Counsel v. FCC*, 183 F.3d 393, 446

In contrast to the incremental changes to the allowable ratio of non-rural consortia participants the Commission has implemented over the years, the new prioritization regime is decidedly non-incremental in its impact on HCF consortia. The significant risk of substantial funding cuts for consortia will radically change consortia economics and risk, potentially driving away existing participants, *both rural and non-rural*, and undermining viability. While the *Order* briefly mentions arguments about the importance of consortia, it is in the context of dismissing concerns by some commenters that increasing the minimum rural percentage will have negative effects.²⁴ But the new prioritization system, which puts HCF consortia with non-rural participation into the bottom two funding priority tiers, will dwarf any impact from changes to the minimum rural percentage. By failing to address these potential impacts, the *Order* disregards prior Commission policies that encourage consortium networks, and prior Commission findings regarding the benefits and desirability of those networks.

C. **De-Prioritizing Funding for Non-Rural Consortium Participants Will Promote Inefficient Healthcare Networks and Will Not Necessarily Reduce RHC Expenditures**

The *Order's* de-prioritization of non-rural sites participating in consortia also disregards how modern health care networks are configured and, as a result, risks increasing program expenditures rather than reducing demand as the Commission believes. Compare the following simplified example of two point-to-point telemedicine circuits: (1) a non-rural health care provider in Peoria, Illinois (non-rural) seeks a circuit to a rural health care provider in Lewiston, Illinois (rural); (2) a rural health care provider in Lewiston, Illinois (rural) seeks a circuit to a non-rural health care provider in Peoria, Illinois. Although each describes the same circuit (containing both

(5th Cir. 1999), *aff'g in part, rev'g in part, and remanding in part, Federal State Joint Board on Universal Service*, CC Docket No. 96-45, First Report and Order, 12 FCC Rcd 8776 (1997)).

²⁴ *Order* ¶ 151.

rural and non-rural segments), under current and longstanding RHC rules, Circuit #1, is ineligible for RHC funding because the applicant is non-rural. Circuit #2, is fully eligible because the applicant is rural.²⁵

Now consider another illustration: if a single eligible rural health care provider has telemedicine connections to ten non-rural health care providers, each of those ten connections are eligible for the RHC subsidy because they originate with the eligible rural location. In contrast, if a non-rural health care provider seeks funding for *ten telemedicine connections to ten rural locations*, that non-rural health care provider cannot receive any RHC subsidy. Note, however, in this last example: if the non-rural health care provider owns one of those rural locations, the non-rural provider could originate its entire network from its rural location and receive RHC subsidy for the entire network, *regardless of the number of connections to non-rural locations*, because each connection originates (for funding purposes) at that one eligible rural health care provider.

Now consider an example of how the HCF handles a modern consortium network: each consortium participant has a connection to a private ring that connects to any or all other network participants on the ring, and may also provide a path to the public Internet, Internet2, or other networks. As a result, all network participants share certain common costs such as maintaining the ring (or subscribing to services that provide a virtual ring or “cloud”), subscribing to commodity access to the public Internet, and accessing any network monitoring services or other shared common services. Subject to limits on the number of non-rural participants, the HCF subsidy is available to all eligible participants for any eligible services. As the Commission has specifically

²⁵ See *HCF Order*, 27 FCC Rcd at 16702, n.137 (“circuits are only eligible for funding if one end of the circuit terminates at an eligible rural entity”). *I.e.*, two things must be true: the applicant must be rural; the circuit must originate (or terminate) at that eligible rural location.

recognized, such an arrangement is more cost-efficient and dispenses with the need to originate traffic in a rural location simply to obtain a subsidy.²⁶

The Commission previously committed to monitoring consortium networks with non-rural participants to ensure they continue to benefit rural participants – and specifically that large non-rural hospitals are not utilizing a disproportionate share of limited funding.²⁷ The Commission has made no inquiry into how well HCF consortium networks are achieving previous Commission goals, and has made no finding (for example) that large non-rural hospitals are benefiting disproportionately. Without such findings, and with significant questions about how much funding is actually going to non-rural health care providers, the Commission should reconsider dramatically altering previous policy commitments to support and promote consortium networks.

III. THE COMMISSION SHOULD RECONSIDER ITS DRASTIC CHANGES TO THE RURAL HEALTH CARE TELECOM PROGRAM.

SHLB also urges the Commission to reconsider (1) the *Order's* broad-brush, tier-based approach to calculating maximum rural rates that providers may charge – an approach with no connection to actual or reasonably estimated service-delivery costs, (2) the *Order's* methodology for determining which urban and rural rates within those tiers are “similar” – which introduces even more distortion, and (3) the *Order's* delegation of broad authority and discretion to USAC to make policy-laden judgments regarding permissible rural and urban rates – decisions that lack

²⁶ *Id.* (noting incentives to maximize funding by ensuring all circuits terminate/originate at a rural location and that “[consortium networks in the pilot program] were able to design their networks with maximum network efficiency in mind because funding is not negatively impacted by inclusion of non-rural sites in those networks.”). Indeed, as consortia adapt to the new regime, they may be inclined to focus common infrastructure in rural areas to assure priority in accessing discounts but with the effect of raising costs and otherwise distorting efficient network design.

²⁷ See *HCF Order*, 27 FCC Rcd at 16709. SHLB does not support allowing non-rural health care providers in distant states and with no actual connection to rural health care providers on the network to be eligible. The Commission could easily address this problem in a targeted fashion.

transparency and cannot possibly be reviewed by actual governmental authorities prior to the time that service providers will have to submit bids. SHLB and other parties, in the limited three-week period available between the publication of the draft *Order* and its adoption, urged the Commission to consider the service- and infrastructure-deployment-suppressing aspects of its approach – or at least to gather and consider critical information before issuing a final order; however, the Commission made only a handful of minor tweaks to the published draft. To avoid harming rural health care providers’ access to the advanced telecommunications service necessary to meet evolving telehealth needs, and to avoid arbitrary results that will necessarily harm the higher-cost areas in each rurality tier, the Commission should, at a minimum, revise its approach to tailor its general mechanism for rural rates more closely to the anticipated underlying costs of providing services, address ambiguities regarding which services are “similar” for urban- and rural-rate determinations, and ensure that decisions about rates, and thus health care support amounts, are made by accountable governmental officials, not a government contractor.

A. The Commission Should Reconsider Its Rural Rate Comparability Tiers that Have No Tie to Reasonably Anticipated Service Delivery Costs

The *Order* replaces the competitive-bidding process for determining rural rates with a new rate-regulation approach: The rural rate in a particular area “will be the median of all available rates charged for the same or functionally similar service in the rural tier where the health care provider is located within the state.”²⁸ USAC is charged with “determin[ing] the rural rate for each eligible service and rural tier in each state and publish[ing]” them.²⁹ A given area’s “rural

²⁸ *Order* ¶ 53. It is unclear whether service providers may charge more than the rural rate. The Commission states that service providers may charge less than the rural rate, but the *Order* is silent as to whether higher rates would be permissible or if the rural rate is simply the maximum amount of the Telecom program subsidy. *Id.* ¶ 64. SHLB would appreciate clarification on this point if the Commission retains the rural rate methodology.

²⁹ *Id.* ¶ 53

tier” depends on its proximity to a Core Based Statistical Area (“CBSA”) and whether that CBSA contains an urban area with a population of a particular size.³⁰ With the exception of one added (and still insufficient) distinction among Extremely Rural areas in Alaska,³¹ that is the full analysis for determining an area’s “rural tier” – and the other areas within a state that are in the same tier and will be used to determine the median rate.

SHLB continues to firmly believe that the best available method for determining the rural rate in a particular area is competitive bidding – competition imposes price discipline, for example, even where only one provider ultimately submits a bid.³² But even if the Commission insists on abandoning that approach, the *Order*’s broad, purely geography-based approach does not group together “comparable rural areas,” pursuant to Section 254(h)(1)(A).³³ As discussed below, the rate methodology to be applied within those arbitrary tiers compounds the problem, making it even more certain that the ceiling for rural rates will not be based on “the rates for similar services,” again, as the statute requires.³⁴

First, the tiers grouped together under the *Order*’s approach are simply far too broad to be comparable in any meaningful sense. As Figure 3 of the *Order* illustrates, enormous swaths of many states like Colorado, Kansas, Maine, Montana, North Dakota, and South Dakota are grouped together as Extremely Rural, even though areas captured within that category in each State may have very little in common. Rural areas in rugged, mountainous southwest Colorado are hardly

³⁰ *See id.* ¶ 32.

³¹ *See id.* ¶¶ 34-37.

³² *See* Federal Acquisition Regulation § 6.102 (containing no requirement that multiple bids be received in order to constitute appropriate “competitive procedures”).

³³ 47 U.S.C. § 254(h)(1)(A).

³⁴ *Id.*

“comparable” to communities in the plains regions of east Colorado, for example, notwithstanding that both might contain areas entirely outside a CBSA. Grouping together rates from those areas notwithstanding that they differ significantly in ways that relate directly to the cost of actually providing service is unreasonable. The same is true in many other states with diverse topography and infrastructure patterns, like West Virginia. The Commission, to a limited but still insufficient extent, recognizes as much in Alaska, an extreme but by no means isolated example of the failure of this rigid, tier-based system to capture truly comparable rural areas.

Second, and relatedly, the rates that the *Order* would set based on this methodology are not tied to any real estimate of service costs, even though the Commission admits in the *Order* that its aim should be to develop a “more accurate measure of the actual costs of providing services to rural areas.”³⁵ The presence or absence of a CBSA or a community of 25,000 people – the key considerations under the *Order*’s approach to determining rurality³⁶ – says little about the teledensity of an area, one of the most significant factors of service cost.³⁷ It also does not reflect other factors that affect the cost of providing service to each community, such as geography, topography, the existing available telecommunications facilities that are already sunk, and the presence of existing non-telecommunications infrastructure like power facilities.

In other contexts, the Commission has recognized and accounted for the many important variables that affect deployment costs. In the high-cost program, for example, the Commission has

³⁵ *Order* ¶ 29.

³⁶ *Id.* ¶ 32.

³⁷ For example, a hospital along the Interstate 15 corridor is in the same rurality tier—“extremely rural”—as health care providers that are located significantly off the beaten track. That hospital will have access to fiber facilities that other rural HCPs will not have, simply because its location provides for more economies of scale. For purposes of comparing rural rates, those locations are not “comparable rural areas.”

developed cost models to approximate service costs, including significant variations within a state.³⁸ Those models are complex, taking into account a wide variety of factors including geography, rock hardness and soil type, material and labor costs, local taxes, and more. And even those models have limitations in forecasting the costs for specific locations. But the Commission has brought none of these available tools to bear in defining “comparable rural areas,”³⁹ with the result that rates in dissimilar rural areas will be combined and used to set permissible rates under the RHC Program. Section 254(h)(1)(A) does not call for such a counter-intuitive approach.

We remain concerned that the Commission has not gathered and considered data on the impact that this methodology will have on the Program.⁴⁰ In some ways, the result is easily foreseeable: Picking the median rate from a pool of dissimilar areas and making that the ceiling for permissible rates in all of those areas will necessarily short-change rural health care providers in the higher-cost areas within that tier in a state. But Program participants and health care providers deserve to know how their areas will be affected by this sea change. And we believe that careful analysis would show the Commission that the rural areas it has grouped together as comparable are anything but for Program purposes.

B. The Order’s Directives for Determining “Similar” Rates Distort both Rural and Urban Rates.

The *Order*’s methodology for determining what services are “similar” introduces even more distortion into rates – both urban and rural – exacerbating the problems inherent to the tier-

³⁸ See generally, e.g., *Connect America Fund, A National Broadband Plan for our Future, Establishing Just and Reasonable Rates for Local Exchange Carriers*, 27 FCC Rcd 17,663 (2011).

³⁹ 47 U.S.C. § 254(h)(1)(A).

⁴⁰ See Letter from John Windhausen, Jr., Executive Director, Schools, Health & Libraries Broadband (SHLB) Coalition, et al., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 17-310, at 2 (filed July 22, 2019).

based approach. When applied to urban rates, it will tend to push rate determinations away from market rates, which will frustrate Congress’s explicit directive in Section 254(h)(1)(A) that rural health care providers not pay more than their urban counterparts. This is because the pool of rates from which an urban-rate median is to be pulled will be too broad and inaccurate to be reliable. When applied to rural rates, it will tend to push rate determinations far from the actual cost of providing service, which will undercompensate providers (even beyond the flaws inherent to the tier-based approach) and disincentivize deployment and upgrades.

The *Order* requires USAC, when considering which services are “similar” for purposes of identifying a median rate, to “consider other services with advertised speeds 30% above or below the speed of the requested service.”⁴¹ The Commission suggests that this +/- 30% range will “enable reasonable rate comparisons,”⁴² but in truth it is so broad that it will sweep in rates that are dissimilar in function and cost. That is particularly so for high-capacity circuits, which many Program participants require. The Commission could have mitigated this variation by computing a median per-Mbps rate within that 30% range, rather than a median of the total circuit price, and applied that per-Mbps rate to the specific circuit purchased by the health care provider, as some parties proposed. The Commission, however, rejected that approach in the *Order*, even though a per Mbps comparison would be more comparable among circuits of different sizes than an absolute rate comparison.⁴³

The Commission also does not explain sufficiently how USAC should account for price variations based on contract length or on discounts for volume, which if left unchecked will distort

⁴¹ *Order* ¶ 15.

⁴² *Id.* ¶ 16.

⁴³ *See id.* ¶ 64 n.179.

rural-rate calculations in particular. The Commission seems to believe that it has no “discretion” to account for these dissimilarities because carriers must provide service at “rates that are reasonably comparable to *rates charged* for similar services in urban areas,”⁴⁴ but that reasoning is flawed in several ways. For one thing, the language quoted from Section 254(h)(1)(A) describes the *urban rate* – not how to determine a permissible rural rate. For another, nothing in the text of Section 254(h)(1)(A) requires the Commission (or USAC) to put on blinders to the economic reality that incorporating long-term contracts and bulk contracts without accounting for their associated discounts will result in artificially low rural rates. It certainly does not prescribe that the “rates for similar services provided to other customers in comparable rural areas”⁴⁵ are the one or ones that happen to occupy the median of a list irrationally skewed toward below-market rates. If USAC is meant to account for this price bias, the Order does not explain how it should do so.⁴⁶

The *Order* also leaves unresolved other significant questions regarding what constitute “similar services.” Because the Commission has chosen to have USAC calculate rates by picking the simple median for “similar services” within a rurality tier, USAC’s discretionary choices on how to resolve ambiguities regarding similar service will have a significant impact on rural and urban rate determinations. For example, the *Order* instructs USAC to take into account when “a health care provider specifies that it requires a dedicated service *or other service level guarantees*” when “identifying functionally similar services for rate comparisons,” but provides USAC with no

⁴⁴ See *id.* ¶ 16 n.49 (quoting 47 U.S.C. § 254(h)(1)(A)).

⁴⁵ 47 U.S.C. § 254(h)(1)(A).

⁴⁶ USAC has had difficulty determining which rates are comparable for purposes of the lowest-corresponding-price rule in the E-rate program in 47 C.F.R. § 54.511. The *Order* essentially asks USAC to perform a similar function here, with much higher stakes for the Telecom Program and with no more guidance to follow.

guidance or guardrails as to how it is to do that other than the exercise of USAC’s discretion.⁴⁷ The *Order* also leaves to USAC “whether the requested service is symmetrical or asymmetrical” in identifying similar services – that difference may or may not be material “[d]epending on the health care provider’s identified needs.”⁴⁸ Likewise, the Commission instructs USAC to consider “functionally equivalent private carriage and information services” when identifying similar services, but provides no more clarity on what actually is functionally similar.⁴⁹ All these lingering ambiguities that USAC will have to address when implementing the Commission’s new rate methodology may inflate urban rates above what is actually being paid by urban health care providers (as is the case today with USAC’s “safe harbor” rates) and carry permitted rural rates further and further away from any real approximation of the cost to offer service to a particular health care provider in a particular area.

* * *

The flaws in the methodology for determining urban and rural rates will directly and negatively impact telehealth support, health care providers, and patients. Urban rates set above market mean rural health care providers will devote more scarce financial resources to telecommunications – and less to patient care – than their urban colleagues. As for rural rates, grouping areas with lower service costs together with areas with higher service costs, and then applying the same rural rate to all those areas based on a median, will systematically under-fund the higher-cost areas. The cost-based waiver – which the Commission describes as geared toward “unique circumstances”⁵⁰ – will be insufficient to address the fundamental problem for rural rates.

⁴⁷ *Order* ¶ 17 (emphasis added).

⁴⁸ *Id.*

⁴⁹ *Id.* ¶¶ 18-19.

⁵⁰ *Id.* ¶ 16 n.49

In a state in which the same rurality tiers encompass areas with significantly different service-delivery costs, for example, the median rural rate may be far below the actual cost of delivering service to the more expensive areas. As a result, contrary to Congress’s intent, telehealth facilities are less likely to be built or upgraded to the higher-cost communities within a comparability zone, and thus will be unavailable to health care providers in those communities. To the extent facilities are available, providers will be forced to pay more for service than Congress intends. Patients will be forced to travel for care, rather than being treated locally. And because anchor institutions like health care providers often drive broadband access for entire communities, others in these underserved areas will find it more difficult and more expensive to access modern communication technologies.

The *Order* creates many questions and leaves many others unanswered. Moreover, it provides no opportunity for program participants to review and provide input on how the outcomes align with real-world experience, but rather leaves USAC to implement the new rules with little to no guidance. Other implementation issues are very likely to present themselves as the Commission and USAC attempt to carry out the *Order*’s fundamental changes to the Telecom Program. Many may not become apparent until the new regime is in place, but some arise already for FY2020. For example, the *Order* eliminates, “effective for funding year 2020,” rules limiting support for satellite services where terrestrial services are available, in part because the new rate regime will rely on the median of all available rates in the same rurality tier.⁵¹ But the new “rules for determining urban and rural rates” do not take effect until “funding year 2021.”⁵² If the Commission does not reconsider in full the major changes in the *Order*, it should address

⁵¹ *Id.* ¶¶ 92, 97.

⁵² *Id.* ¶ 214.

implementation issues like these so program participants can comply with all applicable rules during the transition and moving forward.

C. The Commission Should Reconsider the Delegated Authority and Broad Discretion Given to USAC to Set Rural and Urban Rates.

The fulcrum of the rate-setting regime established by the *Order* is USAC, which must not only collect vast amounts of information on existing rates, but also “determine the rural rate for each eligible service and rural tier in each state” and publish them.⁵³ Likewise, USAC must “determine the urban rate” within the state.⁵⁴ Setting rates is inherently beyond the scope of USAC’s appropriate duties, and even worse, the *Order* leaves to USAC the pivotal, policy-laden duty to “identify[] ‘similar services’ for rate determination[s].”⁵⁵ Many of the questions identified above with respect to which services are “similar” are in effect delegations to USAC to resolve the ambiguity. That delegation of broad authority and discretion exceeds USAC’s expertise and operational capacities, contravenes legal authority, and raises serious concerns regarding transparency and reviewability.

SHLB greatly respects USAC management and staff, and USAC’s skill within its own wheelhouse – *administering* the federal universal service support mechanisms.⁵⁶ But setting rates and exercising judgment regarding the variables that factor into those rates are not administrative activities. They are discretionary and policy-related functions that USAC is, understandably, not built or equipped to perform. USAC lacks, for example, the knowledge and resources to review tariffs and isolate the various components of a carrier’s rural rate. Nor does USAC have experience

⁵³ *Id.* ¶ 53.

⁵⁴ *Id.* ¶ 38

⁵⁵ *Id.* ¶ 14.

⁵⁶ 47 C.F.R. § 54.702(a).

accounting for price variations based on contract length or service volume, analyzing the effect of differences between transmission technologies, identifying certain characteristics of a service (*e.g.*, dedicated vs. best efforts, symmetrical vs. asymmetrical), or evaluating how such considerations interplay with the Commission’s rules.⁵⁷ The *Order* provides only extremely high-level guidance at best on how USAC should make those determinations, as discussed above.

Delegation of these decisions outside USAC’s aegis is not only unwise, but likely unlawful. The Commission’s rules acknowledge USAC’s lack of expertise by prohibiting it from performing these kinds of functions: “The Administrator may not make policy, interpret unclear provisions of the statute or rules, or interpret the intent of Congress. Where the Act or the Commission’s rules are unclear or do not address a particular situation, the Administrator shall seek guidance from the Commission.”⁵⁸ The ambiguities discussed in this Petition, however, exist *precisely because* neither current law nor the *Order* itself addresses the relevant “situations.” Through the *Order*, the Commission seeks guidance from USAC, rather than the reverse. Vesting USAC with the authority and discretion to resolve those ambiguities turns Section 54.702(c) on its head.

In addition, directing USAC to set rates violates Section 205 of the Communications Act, which permits the Commission, but not other bodies, to “determine and prescribe” specific rates and rate-setting practices.⁵⁹ By defining the rural or urban rate as the median of the applicable set of rates and charging USAC with computing that median, the *Order*’s methodology results in the

⁵⁷ The staff of one state commission, which does have experience reviewing tariffs, reported that it could not determine a median rural rate using the guidance in the Commission’s order.

⁵⁸ *Id.* § 54.702(c).

⁵⁹ See 47 U.S.C. § 205(a); see also *Nader v. FCC*, 520 F.2d 182, 201 (D.C. Cir. 1975) (holding that the statutory terms should be construed broadly). *Nader* also makes clear that Section 205(a)’s prohibition on the delegation of rate-setting also applies to determining the elements that constitute the rate, thereby providing additional support for the fact that delegating the policy-laden functions involved in establishing “similar services” is unlawful. See *Nader*, 520 F.2d at 203-04.

prescription of a rate by USAC rather than the statutorily appropriate body, the Commission. The *Order* also fails to provide a mechanism for a hearing on the lawfulness of prescribed rates, which is not only a requirement for the Commission’s authority to set rates, but also is a non-delegable power.⁶⁰ The idea that Congress would impose such a procedural protection on the Commission but not on a private entity to which the Commission delegates its authority – even assuming such a delegation were not prohibited by Section 205(a) – grates common sense.

Finally, the *Order*’s delegation to USAC also violates the well-established constitutional doctrine that “inherently governmental functions” must be performed by the government and cannot be conferred upon “private persons.”⁶¹ The Supreme Court has expressly held that ratemaking is not only a governmental function, but a legislative one. USAC, however, is a private entity, not a government body, and is therefore not permitted to engage in ratemaking.

This unlawful arrangement raises practical concerns regarding the transparency and reviewability of the rates USAC sets. While the *Order* directs USAC to publish the “underlying rate data” used in making rate determinations,⁶² it provides no mechanism for Program participants to understand how USAC determined why the service for a particular rate included in its data was actually similar to the service requested by a health care provider, or whether or why other rates were excluded. This is a significant problem because USAC today does not explain how it

⁶⁰ 47 U.S.C. §§ 155(c)(1), 204(a)(2).

⁶¹ See, e.g., *Carter v. Carter Coal Co.*, 298 U.S. 238, 311 (1936); *Lyttle v. AT&T Corp.*, 2012 WL 6738242, at *16 (W.D. Pa. Nov. 15, 2012) (noting that “inherently governmental functions” include interpreting law and exerting ultimate control over the disbursement of federal funds, but not the mere collection of fees and other charges “where the amount to be collected is predetermined or can be readily calculated”).

⁶² *Order* ¶ 78. It is unclear what is meant by “underlying rate data” and whether that includes just the rates, or also service descriptions, restrictions, and whether there are actually users taking service at that rate.

determines applicable rates or sets its “safe harbor” urban rates. Nor is the theoretical availability of eventual review of USAC’s similarity determinations a meaningful check on USAC’s discretion, contrary to the Commission’s assertion in the *Order*.⁶³ A party must first appeal to USAC, and only later to the Commission⁶⁴ – a process that can take years, particularly if the appeal presents novel issues,⁶⁵ as is likely here. Given the limited time that will be available for service providers and health care providers to ascertain what USAC considers to be the comparable rates for similar service prior to bidding, bidding and contracting will long be completed (and in many cases either services rendered—or service providers will have foregone the opportunity to bid) by the time the Wireline Competition Bureau decides any appeal. In this setting, review long after the fact is not an adequate remedy for the limitless delegation of ratemaking authority to USAC.

To be sure, the *Order* states that “the Commission has not delegated ratemaking authority to the Administrator.”⁶⁶ But the *Order* also recognizes that USAC is charged with “rate determination.”⁶⁷ And given that USAC has the authority to make myriad discretionary decisions regarding what rates will be included in the data set from which a median is chosen as *the rate* carriers may charge and *the rate* rural health care providers are responsible for, with Commission review practically unavailable as discussed above, it blinks reality to suggest that USAC will not be engaged in ratemaking.

For these reasons, the Commission should reconsider its decision to place these determinations in USAC’s hands. Instead, if the Commission uses this rate-setting scheme at all,

⁶³ *Id.* ¶ 90.

⁶⁴ 47 C.F.R. § 54.719(a).

⁶⁵ *Id.* § 0.291(a)(2).

⁶⁶ *Order* ¶ 88.

⁶⁷ *E.g., id.* ¶ 14.

SHLB prefers delegation to the Bureau. The Bureau has more expertise and broader ability to gather additional data points, and review of a Bureau decision would clearly be governed by the Commission's rules and the Administrative Procedure Act. The Bureau could follow a process similar to that used when the high-cost model was developed or to that it uses to establish the Eligible Services List for the E-rate program.

* * *

SHLB encourages the Commission to reconsider this overhaul of the rate methodology for the Telecom Program. The massive changes in the definition of rural and urban rates for the Program are inconsistent with the Commission's statutory mandate in Section 254(h) and will lead to intolerable outcomes for underserved communities. The accompanying delegation of significant policy discretion and authority to USAC to set rates is legally suspect on a number of grounds, raises transparency concerns, and risks serious instability for upcoming funding years. The Commission has the opportunity now to take a step back, study these issues, and ensure that the Telecom Program has a solid footing moving forward. It should do so while it still has a chance to limit the fallout for underserved communities and people that rely on the Program.

IV. OTHER ISSUES FOR RECONSIDERATION AND/OR CLARIFICATION

A. The Commission Should Clarify that Low Density Rural Areas without MUA/P Designations Will be Considered MUA/P

While the *Order's* rationale for adopting the Underserved Area/Population ("MUA/P") designations from the Health Resources and Service Administration makes sense in some respects, it overlooks the fact that large areas of the country lack an MUA/P designation not because they

are served, but because they are so sparsely populated that a designation has never been sought.⁶⁸ Large remote areas in many western states clearly fall into this category.⁶⁹ The Commission should clarify that areas with a county (or equivalent) population density below twenty persons per square mile and that lack an MUA/P designation should nonetheless be considered MUA/P.⁷⁰ Such a clarification would not frustrate the purposes for implementing the MUA/P requirement, but would also not needlessly de-prioritize some of the most remote geographic areas in the country.

V. CONCLUSION

WHEREFORE, good cause having been shown, the Commission should grant this petition and reconsider the recent Report and Order on Promoting Telehealth in Rural America in WC Docket 17-310. *See* 47 C.F.R. Section 1.429.

Respectfully submitted,



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⁶⁸ *See generally* Medically Underserved Area/Population (MUA/P) Application Process, HRSA Health Workforce, <https://bhwh.hrsa.gov/shortage-designation/muap-process> (last visited Nov. 7, 2019).

⁶⁹ *See generally* https://data.hrsa.gov/ExportedMaps/MUA/HGDWMapGallery_MUA.pdf.

⁷⁰ *See generally*, 2010 Census Results – United States and Puerto Rico, Population Density by County or County Equivalent, https://www2.census.gov/geo/pdfs/maps-data/maps/thematic/us_popdensity_2010map.pdf (last visited Nov. 7, 2019).

EXHIBIT A

Altru Rural Telehealth Network

How Consortium Funding Benefits Rural Healthcare Providers

1. Brief description of Altru Rural Telehealth Network

Altru Rural Telehealth Network (ARTN) is led by Altru Health System and serves Altru locations as well as 4 other HCPs located in rural Minnesota and North Dakota. The sites have connectivity needs from 5MB/s up to 10GB/s to support various types of healthcare technology in the region.

2. Telemedicine Services Provided by the Consortium to Rural Healthcare Providers:

Altru Telemedicine connects Altru providers located in Grand Forks and our other regional clinics to patients located at various facilities across the region to deliver effective and efficient healthcare through secure audio/video technology. In 2018, Altru Telemedicine connected to 15 Regional Hospitals (CAHs), 6 Regional Clinics, 7 Skilled nursing centers and residential settings, and the 11 Altru Regional Clinics. A total of 11,398 patient encounters were completed this year, for a total of 36,840 patient encounters since 2008.

More than 30 Service Lines delivered by 115+ providers use telemedicine to reach Altru's regional patients and support patient care. Our highest utilization is seen in Oncology, Nephrology, Psychiatry, Infectious Disease, Urology, and Cardiology. All use technology to increase the regional care necessary for optimal patient care. The rural facilities care for patients at their sites in partnership with the specialists at Altru. In Oncology, telemedicine connections enable the doctor to see the patient and 'clear' them for chemo treatment and infusion services to be delivered at the rural facilities. Without this program, patients would make multiple trips several hours in difficult weather. Infectious disease patients are very ill and at risk. Some of these patients are in the rural hospital and connect for specialist care.

These connections to the rural hospitals support inpatient bed usage, which means significant financial support to the rural hospital. To the provider, fewer hours in travel to rural sites means an increase in personal satisfaction and greater efficiency while maintaining the quality of patient care and access to care.

Altru has four rural Renal Dialysis Centers that are dependent on telemedicine to maintain the close care required. Three or the four monthly provider encounters are carried out at the Renal Care Centers by the Nephrologists. Without the Telemedicine connections and care they provide, the centers would not be rural and those patients would need to leave their home communities.

Altru also connects our patients located in The Altru hospital Grand Forks for emergency services of Telestroke, Telepsychiatry and Burn care. The Emergency Department delivers telestroke care using Telemedicine to connect with offsite tele-neurologists, improving the response time to care during suspected strokes.

Telepharmacy is a service Altru delivers to several rural hospitals under contract for medication review by the Altru pharmacists. This is an on-line EMR review with a video option to view the medication, if a first dose of medication.

Teleradiology is also a service Altru supports and provides to efficiently connect rural hospitals and clinics to a qualified radiology service around the clock. Timely reading of images saves lives. Rural hospitals can no longer afford a local radiologist, teleradiology is a necessity for treatment, where ever that patient is located.

Remote Patient Monitoring services are now an integral part of Case Management for chronic disease management. Altru has 36 clinical grade internet connected monitors available to place in patients' homes to daily assess blood pressure, weight, oxygen saturation and general wellbeing. The patients cared for typically have diagnoses of CHF, COPD, or chronic health conditions. The interactive tablet monitors send this information to a dashboard that is monitored by providers and nurses daily and who respond to readings that are out of established norms. The data is integrated within Epic EMR for provider informatics. Those patients on the RPM program demonstrate a re-hospitalization rate of 3-5%, while the national average is 17%. Altru monitored 215 different patients in 2018. Without these connections and supported care, rural patients would not be able to stay in their homes. They would leave the communities and engage in costly healthcare services.

Virtual Care describes patient-initiated digital communications with a physician or other qualified health professional. Commenting on the new codes for digital health services, AMA President Patrice A. Harris, MD, MA said, "With the advance of new technologies for e-visits and health monitoring, many patients are realizing the best access point for physician care is once again their home....The new CPT codes will promote the integration of these home-based services that can be a significant part of a digital solution for expanding access to health care, preventing and managing chronic disease, and overcoming geographic and socioeconomic barriers to care."

3. Electronic Data Services Provided by Consortium facilities to Rural Healthcare Providers:

In addition to telemedicine, Altru also offers EMR services to many rural facilities, either through use of our system to access information about their patients through EpicCare Link, or by extending our EMR via Epic's Community Connect program.

4. Other Benefits to Rural HCPs of Consortium Participation

Altru has a 100% patient satisfaction rate when surveyed on telemedicine services. Patients not only appreciate it, they depend on it. Telemedicine encounters have more family members included in the encounters, because they can attend the doctor visit without leaving town.

Providers now depend on these telemedicine connections to their rural patients. The frequency or timeliness of these encounters improve the care delivery because the care plan is updated and changed according to patients' needs.

Rural facilities benefit from keeping patients local. In one year, at only one of the clinics we serve with Telemedicine, we estimated that \$110,000 was 'kept local' through x-rays, infusion, and other treatments provided.

At one time, we felt that Telemedicine provided convenience, and it stills does. But today, patients have a choice of healthcare delivery options. These include Walmart, CVS and other online products. Local healthcare is competing for the patient loyalty. Telemedicine at local facilities helps with the 'brand stickiness' and to keep those patients local.

Patients that are transported by rural facilities endure costly responsibilities. To transport a patient takes a van, a driver and risk to the patient. A winter ride of an 85 yr old hip fracture patient for 2 hours one way for a 15 min appointment is difficult to understand when a telemedicine visit with the local care provider who can interact with the teled doctor and devise a plan of care makes so much more sense.

5. Funding Year 2018 Annual Report – List of Telemedicine/Telehealth services available to consortium participants.

| Telehealth Applications | Select only applicable (Use the dropdown) |
|--|--|
| 1. Exchange of EHRs | Yes |
| 2. Participation in Health Information Exchange | Yes |
| 3. Remote Training | Yes |
| 4. Adult Echocardiology | Yes |
| 5. Adult Psychiatry | Yes |
| 6. Allergy / Rheumatology / Immunology | Yes |
| 7. Cardiovascular Surgery (Including pre, post surgery) | Yes |
| 8. Chronic Disease Counseling (diabetes, cardiac rehab etc...) | Yes |
| 9. Clinical Pharmacology / Pharmacy | Yes |
| 10. CT and MRI Interpretations (adult and pediatric) | Yes |
| 11. Dentistry (adult and pediatric) | |
| 12. Dermatology (adult and pediatric) | Yes |
| 13. Diabetes Clinical Services (adult and pediatric) | Yes |
| 14. Endocrinology clinical services (adult and pediatric) | Yes |
| 15. ENT (adult and pediatric) | |
| 16. ENT Surgery (including pre, post surgery) | |
| 17. Gastroenterology (adult and pediatric) | Yes |
| 18. General Pediatrics | |
| 19. General surgery (including pre, post surgery) | Yes |
| 20. Genetics and Genetic Counseling (adult and pediatric) | Yes |
| 21. Geriatrics | Yes |
| 22. Hematology (adult and pediatric) | Yes |
| 23. Hospice Services | |
| 24. Infectious Disease / HIV (adult and pediatric) | Yes |
| 25. Intensivist / Intensive Care Unit Services | |
| 26. Interventional Cardiology | |
| 27. Neonatology | Yes |
| 28. Nephrology (adult and pediatric) | Yes |
| 29. Neurology and Neurodevelopmental (adult and pediatric) | Yes |
| 30. Obstetrics / Gynecology | |
| 31. Oncology (adult and pediatric) | Yes |
| 32. Orthopedic Surgery (including pre, post surgery) | Yes |

| | |
|--|--|
| 33. Orthopedics (adult and pediatric) | Yes |
| 34. Pathology | |
| 35. Pediatric / Adolescent Psychiatry | Yes |
| 36. Pediatric Echocardiology | |
| 37. Physiatry / Physical Medicine (adult and pediatric) | |
| 38. Physical Therapy (adult and pediatric) | |
| 39. Plastic Surgery (including pre, post surgery) | Yes |
| 40. Pulmonology (adult and pediatric) | Yes |
| 41. Primary Care (adult) | Yes |
| 42. Psychological Counseling and Other services (adult and pediatric) | Yes |
| 43. Radiology (adult and pediatric) | Yes |
| 44. Rehabilitation (adult and pediatric) | |
| 45. Routine Adult Cardiology (Includes CHF) | Yes |
| 46. Routine Pediatric Cardiology | |
| 47. Speech Therapy (adult and pediatric) | Yes |
| 48. Substance Abuse Services | |
| 49. Trauma | |
| 50. Wound Care / Decubitus Ulcers (adult and pediatric) | Yes |
| 51. Other (Please type other Telehealth applications) | Oncology Nurse Navigation services; Weight loss management; Health coaches |

Colorado Hospital Association Broadband Services How Consortium Funding Benefits Rural Healthcare Providers

1. Brief description of Colorado Hospital Association Broadband Services:

Colorado Hospital Association Broadband Services (CHABS), formerly known as Colorado Telehealth Network (CTN), has been serving Colorado nonprofit health care organizations since 2008. CTN was a participant in the Rural Health Care Pilot Program. CTN operated over a network provided by CenturyLink; that network was sunset on June 30, 2019, due to technological advances that superseded the current network infrastructure. With the sunset of the network, Colorado Hospital Association rebranded as CHABS which is now the consortium leader. The CHABS consortium consists of sixty-two organizations located in Colorado and two organizations in Montana. The broadband speeds at each healthcare provider vary by operational needs.

2. Telemedicine Services Provided by the Consortium to Rural Healthcare Providers:

CHABS involvement in telehealth is enabling the use of telehealth by maximizing on subsidized broadband connections and networks for every member that we serve. With the sunset of CTN, CHABS now solely serves as a consultant in telehealth.

CHABS has advanced the adoption of telehealth through education and training with nonprofit locations in Colorado. After adequate broadband is secured by the organizations that are served by CHABS, inquiries are made with members regarding their current telehealth practices and plans for implementing telehealth. Specifically, CHABS has served in a consultant role with Lincoln Community Hospital to assist in planning, prioritizing and the initial implementation of telehealth deployment of behavior health, a mobile clinic unit and increased access to specialty services.

3. Electronic Data Services Provided by Consortium facilities to Rural Healthcare Providers:

CHABS does not currently provide any electronic services to members.

4. Other Benefits to Rural HCPs of Consortium Participation

With the use of federal subsidies, members of CHABS utilize health information technology to provide electronic transmission of data through imaging, electronic medical records and telehealth software.

The goal of the consortium is to support the development and use of telehealth practice and technology throughout the state of Colorado. Telehealth is a viable tool that can change the face of health care delivery in rural areas. It can provide lifesaving and life-

Broadband Services

changing care allowing patients to be cared for in their community with immediate access to specialists. It is timely and efficient. The patient can receive immediate care that produces a better outcome, eliminating the need for long-term, expensive care (e.g., a stroke patient obtains immediate attention reversing the stroke and avoiding being debilitated and potentially cared for the remainder of their life). With regards to qualitative savings, there is a reduction in transportation costs, an avoidance of lost wages, a reduction in hospital costs and the revenues remain within the community for pharmacy costs.

5. Funding Year 2018 Annual Report – List of Telemedicine/Telehealth services available to consortium participants:

Below is a list of telehealth services that can be utilized by nonprofit health care organizations in the CHABS consortium with proper broadband connectivity.

| | |
|--|-----|
| 1. Exchange of EHRs | Yes |
| 2. Participation in Health Information Exchange | Yes |
| 3. Remote Training | Yes |
| 4. Adult Echocardiology | Yes |
| 5. Adult Psychiatry | Yes |
| 6. Allergy / Rheumatology /Immunology | Yes |
| 7. Cardiovascular Surgery (including pre, post-surgery) | Yes |
| 8. Chronic Disease Counseling (diabetes, cardiac rehab etc.) | Yes |
| 9. Clinical Pharmacology /Pharmacy | Yes |
| 10. CT and MRI Interpretation (adult and pediatric) | Yes |
| 11. Dentistry (adult and pediatric) | Yes |
| 12. Dermatology (adult and pediatric) | Yes |
| 13. Diabetes clinical Services (adult and pediatric) | Yes |
| 14. Endocrinology clinical services (adult and pediatric) | Yes |
| 15. ENT (adult and pediatric) | Yes |
| 16. ENT surgery (including pre, post-surgery) | Yes |
| 17. Gastroenterology (adult and pediatric) | Yes |
| 18. General Pediatrics | Yes |
| 19. General surgery (including pre and post-surgery) | Yes |
| 20. Genetics and Genetic Counseling (adult and pediatric) | Yes |
| 21. Geriatrics | Yes |
| 22. Hematology (adult and pediatric) | Yes |
| 23. Hospice Services | Yes |
| 24. Infectious Disease | Yes |
| 25. Intensivist / Intensive Care Unit Services | Yes |
| 26. Interventional Cardiology | Yes |
| 27. Neonatology | Yes |
| 28. Nephrology (adult and pediatric) | Yes |
| 29. Neurology and Neurodevelopmental (adult and pediatric) | Yes |

| | |
|---|-----|
| 30. Obstetrics / Gynecology | Yes |
| 31. Oncology (adult and pediatric) | Yes |
| 32. Orthopedic Surgery (including pre, post-surgery) | Yes |
| 33. Orthopedics (adult and pediatric) | Yes |
| 34. Pathology | Yes |
| 35. Pediatric /Adolescent Psychiatry | Yes |
| 36. Pediatric Echocardiology | Yes |
| 37. Physiatry / Physical Medicine (adult and pediatric) | Yes |
| 38. Physical Therapy (adult and pediatric) | Yes |
| 39. Plastic Surgery (including pre, post-surgery) | Yes |
| 40. Pulmonology (adult and pediatric) | Yes |
| 41. Primary Care (adult) | Yes |
| 42. Psychological Counseling and Other Services (adult and pediatric) | Yes |
| 43. Radiology (adult and pediatric) | Yes |
| 44. Rehabilitation (adult and pediatric) | Yes |
| 45. Routine Adult Cardiology (includes CHF) | Yes |
| 46. Routine Pediatric Cardiology | Yes |
| 47. Speech Therapy (adult and pediatric) | Yes |
| 48. substance Abuse Services | Yes |
| 49. Trauma | Yes |
| 50. Wound Care / Decubitus Ulcers (adult and pediatric) | Yes |

North Carolina Telehealth Network

How Consortium Funding Benefits Rural Healthcare Providers

1. Brief description of the North Carolina Telehealth Network

The NC Telehealth Network Association (NCTNA) is the consortium lead for the North Carolina Telehealth Network (NCTN). NCTN is one of the Rural Healthcare Program's founding consortia, participating in the Rural Healthcare Pilot, and being among the first to join the newly formed HCF in 2013. Currently NCTNA leads the country's fourth largest consortium. NCTNA leverages a state-wide fiber optic network connecting about 325 sites throughout North Carolina from a health department in Macon County in our Western mountains to a community health center on Ocracoke Island.

As a non-profit, NCTNA does not prioritize profits. Instead, it enhances its value to its subscribers, particularly to smaller, rural providers. For instance, NCTNA has reduced its 2018 base subscription rate to roughly half the 2010 base rate for its subscribers. It operates with about a seven percent administrative overhead, and we are "member-led" with a board made up of member representatives from North Carolina's behavioral health providers, hospitals, and health departments. Our members chart NCTNA's direction.

2. Example Telemedicine Services Provided via the NCTN to Rural Healthcare Providers:

Daymark Recovery Services (DRS) is a North Carolina behavioural services provider and a North Carolina Telehealth Network subscriber. Its services include both outpatient and residential psychiatric services to address mental illnesses, various developmental disabilities and substance use disorders. DRS provides tailored, evidence-based services to roughly 250,000 patients at locations distributed across 50 of North Carolina's 100 counties. Importantly, about two-thirds of these sites are in rural North Carolina. Example rural sites are those in Reidsville, Wadesboro, Raeford, Sparta, and Newland. Its administrative offices and data center are in an urban location just outside Charlotte.

As an innovator in the behavioral services space, DRS has come to rely heavily on network-based technology solutions to provide high-quality care that is also very accessible care for its patients throughout the state. DRS believes its services should be patient-centric, and in support of this philosophy it has introduced MyHealthPoint, a patient portal, as well as clinical patient summaries. Now DRS patients can track their care with accounts of their appointments, medications, test results, and patient education. DRS protects its patients with electronic prescriptions. Their providers can view their patients' medication history, monitor controlled substances prescriptions, and reduce prescription errors. DRS has also introduced the myStrength mobile and web application to nearly 40,000 of its patients to improve and extend care to the patient. With myStrength providers plan treatment and manage cases, offer relapse management tools, and expand the integration of self-care resources. Collectively these technology solutions enable patients to become more engaged in their own care. MyPoint, myStrength, and the DRS escript solution are all distributed technologies. They rely on connectivity for the transmission of data to and from DRS's many clinical sites, data and administrative centers, and vendor sites. The foundation that supports these mission-critical applications and in turn, the DRS clinical operations is the NCTN broadband network.

As a second example NCTN member, Vidant Health System is headquartered in Greenville North Carolina, an urban site. It serves roughly one and a half million people throughout 29 of North Carolina's Eastern counties. While Vidant relies on many physician practices, at the heart of its service is a network of mostly rural, critical access hospitals. These include hospitals in Beaufort, Duplin,

Edgecombe, Bertie, Chowan and Hertford counties. These counties are in the “belt buckle” of the nation’s stoke belt. North Carolina has the sixth highest prevalence of stroke deaths among all fifty states, and death rates from stroke East of I-95 are twice the national average.

Of course, the likelihood that a stroke will lead to death or disabilities is dependent upon the time from the stroke event to the patient’s diagnosis and treatment. Unfortunately, rapid access to effective care may not be readily available in rural Eastern North Carolina. Vidant has connected hospitals in these counties to the Wake Forest Baptist Telestroke Network based in Winston-Salem. The Network relies on the exchange of patient information between Wake Forest Baptist stroke specialists and Vidant’s rural hospitalists and emergency room doctors. With 24-hour access, the Telestroke Network specialists use carts and leading-edge telemedicine robots to consult with emergency room doctors in the participating rural hospitals at any time to diagnose patients and pursue the most effective treatments. Over 2500 consultations have been conducted over the Telestroke network.

As a final example, The Martin, Tyrell, Washington District Health Department (MTW) serves three of the poorest, most rural counties in NC. About a third of their residents live below the poverty level. They have no public transit, and they have one critical access, mostly full-service hospital to serve the three counties. In other words, access to acute care, behavioral health services, and dental services is a major issue for these counties. In turn these access issues promote the disproportionate prevalence of chronic conditions and diseases of despair like diabetes, stroke, suicide, substance use disorders, and a range of dental issues. MTW is well-aware of these problems and is expanding its clinical services including the introduction of telehealth services, particularly telepsych services. Leveraging NCTN as an inexpensive alternative for reliable, high-quality connectivity, MTW, has partnered with another health department in Elizabeth City, an urban site, and with psychiatric clinicians at ECU in Greenville, another urban site. Using the service of a Licensed Social Worker and two psychiatrists, MTW can now provide mental health specialty care, prescribe medications, integrate behavioral health care and primary care for its patients subject to comorbidities, reduce commonplace delays in care, enhance their patient’s continuity of care, and in general, address transportation as a key barrier to care. In other words, MTW can now provide resources that address a critical community need as a collaborator with providers from urban centers.

3. Example Electronic Data Services Provided by Consortium facilities to Rural Healthcare Providers:

All the providers in the illustrations above also rely on NCTN to provide electronic data services among their rural and urban facilities and between their providers and their urban and rural patients. For example, DRS has joined the Atrium Healthcare Health Information Exchange. Now DRS providers can leverage the Exchange to review complete patient medical records for those Daymark patients who visit Atrium Healthcare facilities. The Atrium Data Center is in an urban site near Charlotte. DRS has also adopted Direct Messaging. With Direct Messaging, DRS healthcare professionals can securely share patient records in real time. Vidant is an EPIC EHR site, distributing EPIC instances and services to all its rural critical access hospitals and to its rural clinics, and MTW also relies on its EHR to access and exchange patient information and teleconferencing services for training and collaborations with other health department and healthcare providers.

North Carolina’s Health Information Exchange and its local health departments is another case in point. To expedite the exchange and analysis of patient information, North Carolina has established a statewide health information exchange known as NC HealthConnex. NC HealthConnex is “a secure, standardized electronic system in which (healthcare) providers can share important patient health information. The use of this system promotes the access, exchange, and analysis of health information.” The HealthConnex data center is in Raleigh.

Eighty-five local health departments have facilities across all of North Carolina's 100 counties, most of which are rural. Our health departments provide a number of services like maternal and child health, communicable disease control, and healthcare prevention services, particularly for chronic diseases. One thing all these and other public health services have in common is the exchange and analysis of patient information.

As core users of patient information to promote their communities' population health, NC's local health departments are among the early adopters of NC HealthConnex. About 30 of the state's health department are currently participating, ranging from small rural health departments in the North Carolina mountains to the larger Triangle-based health departments to those on the North Carolina coast. As examples of the HIE benefits for local health departments and their communities, the health departments are tasked with foodborne and infectious disease control. This role requires what is known as syndromic surveillance. In other words, epidemiologists and communicable disease nurses peruse patient information for spikes in infectious disease symptoms, and with this early detection information, they target the source of the infection and stop the spread of the identified diseases. Or to control chronic diseases like diabetes and heart disease, they undertake community health assessments to determine the prevalence of chronic conditions in selected communities. Once they know where the prevalence is highest, they can introduce evidence-based prevention interventions. Again, this requires the compilation and analysis of patient information. Many health departments also operate clinics as their community's safety net providers. In this role, they can share information about individual patients with other community healthcare providers to avoid redundancy in tests and images, and to leverage the patient's medical history.

Health departments have been an NCTN priority from its beginnings, and the majority are subscribers now. Most rely heavily on urban healthcare providers and data centers to do their jobs.

4. Other Benefits to Rural HCPs of Consortium Participation

An important concern for rural patients is the inconvenience and expense associated with travel to urban, often tertiary care health centers. Typically, they travel to take advantage of specialists or specialty equipment. Telehealth can reduce patient travel and the associated time and expense. As an example, the collaboration between Vidant ED doctors and the Wake Forest Baptist stroke specialist has reduced patient travel. As noted by Charles H. Tegeler, M.D., medical director of Wake Forest Baptist Medical Center's Telestroke Network. "Telestroke is a service that strengthens the care provided in the local community while providing access to state-of-the-art acute stroke interventions. We find that about half of telestroke consults result in patients remaining at the community hospital where they are treated to recuperate near to family and friends."

5. Funding Year 2018 Annual Report – List of Telemedicine/Telehealth services available to consortium participants.

| Telehealth Applications | Select only applicable (Use the dropdown) |
|---|--|
| 1. Exchange of EHRs | Yes |
| 2. Participation in Health Information Exchange | Yes |
| 3. Remote Training | Yes |
| 4. Adult Echocardiology | Yes |
| 5. Adult Psychiatry | Yes |
| 6. Allergy / Rheumatology / Immunology | Yes |
| 7. Cardiovascular Surgery (Including pre, post surgery) | Yes |
| 8. Chronic Disease Counseling (diabetes, cardiac rehab etc...) | Yes |
| 9. Clinical Pharmacology / Pharmacy | Yes |
| 10. CT and MRI Interpretations (adult and pediatric) | Yes |
| 11. Dentistry (adult and pediatric) | Yes |
| 12. Dermatology (adult and pediatric) | Yes |
| 13. Diabetes Clinical Services (adult and pediatric) | |
| 14. Endocrinology clinical services (adult and pediatric) | |
| 15. ENT (adult and pediatric) | Yes |
| 16. ENT Surgery (including pre, post surgery) | |
| 17. Gastroenterology (adult and pediatric) | |
| 18. General Pediatrics | Yes |
| 19. General surgery (including pre, post surgery) | |
| 20. Genetics and Genetic Counseling (adult and pediatric) | Yes |
| 21. Geriatrics | |
| 22. Hematology (adult and pediatric) | |
| 23. Hospice Services | |
| 24. Infectious Disease / HIV (adult and pediatric) | Yes |
| 25. Intensivist / Intensive Care Unit Services | |
| 26. Interventional Cardiology | |
| 27. Neonatology | |
| 28. Nephrology (adult and pediatric) | |
| 29. Neurology and Neurodevelopmental (adult and pediatric) | Yes |
| 30. Obstetrics / Gynecology | Yes |
| 31. Oncology (adult and pediatric) | Yes |
| 32. Orthopedic Surgery (including pre, post surgery) | |
| 33. Orthopedics (adult and pediatric) | Yes |
| 34. Pathology | Yes |
| 35. Pediatric / Adolescent Psychiatry | Yes |
| 36. Pediatric Echocardiology | |
| 37. Physiatry / Physical Medicine (adult and pediatric) | |
| 38. Physical Therapy (adult and pediatric) | |
| 39. Plastic Surgery (including pre, post surgery) | |
| 40. Pulmonology (adult and pediatric) | |
| 41. Primary Care (adult) | Yes |
| 42. Psychological Counseling and Other services (adult and pediatric) | Yes |
| 43. Radiology (adult and pediatric) | Yes |
| 44. Rehabilitation (adult and pediatric) | Yes |
| 45. Routine Adult Cardiology (Includes CHF) | |
| 46. Routine Pediatric Cardiology | |
| 47. Speech Therapy (adult and pediatric) | Yes |
| 48. Substance Abuse Services | Yes |
| 49. Trauma | Yes |
| 50. Wound Care / Decubitus Ulcers (adult and pediatric) | Yes |
| 51. Other (Please type other Telehealth applications) | Patient health survey; Retinal imaging |

New England Telehealth Consortium

How Consortium Funding Benefits Rural Healthcare Providers

1. Brief description of the New England Telehealth Consortium

NETC is one of the largest consortium networks in the RHC program. Started in 2008 under the RHC Pilot Program, it is now exclusively utilizing the Healthcare Connect Fund (HCF). With its \$24.6 million initial Pilot Program award, NETC was able to design, implement, and now operate a growing, dedicated health care network across New England. NETC started with 320 sites in Maine, New Hampshire, and Vermont, and has grown the network to 1,097 sites extending into Massachusetts, Rhode Island, and Connecticut. With the help of the initial Pilot Program investment (at an 85% subsidy level), NETC designed a highly efficient network with redundant network cores (NETC owned) and leases competitively priced last-mile and middle-mile broadband connectivity from multiple providers.

In designing this regional network, NETC leveraged existing carrier infrastructure and, through requests for proposals aggregating demand for hundreds of health care sites, obtained long term contracts with multiple broadband vendors providing exceptionally low monthly rates. To ensure both network reliability and maximum competition between broadband vendors, NETC built and maintains network core infrastructure at two diverse locations in New England, operates its own network operations center (NOC) to monitor and manage network performance for private network services, and leases network transport “pipes” to Boston and New York to obtain low-cost commodity Internet access from Tier 1 providers. As a result of NETC’s expansion, it has become a network-of-networks, using the NETC ring and redundant cores to connect health care networks and systems across our region – meeting the FCC’s goal for facilitating the digital interconnection of regional health care sites.

2. Example - Urban Hospital provides critical telehealth applications to rural health clinics in Maine:

Northern Light Health/Eastern Maine Medical Center (EMMC), a tertiary hospital in Bangor, Maine uses NETC to provide both Electronic Health Records (EHR) and Picture Archiving and Communication System (PACS) imaging to 10 rural hospital systems in Maine such as Mayo Regional Hospital in Dover-Foxcroft, Mount Desert Hospital in Bar Harbor, and Northern Maine Medical Center in Fort Kent, Maine. Traffic on the EMMC NETC circuit exceeds 5 TeraBytes of PACS transmissions per day with demand regularly increasing. PACS are used for care that is dependent on the imagery associated with CT scans, MRIs, X-rays, and echocardiograms, for example. As these applications become more advanced, the imagery becomes richer and more data intensive, with two-dimensional image “slices” often combined to create dynamic three-dimensional models.

3. Example - Seven coastal Maine Islands have affordable broadband access that allows island residents to receive mainland medical care via telemedicine:

Maine Seacoast Mission uses NETC to provide telemedicine services to hundreds of people who live in isolated communities on multiple islands off the coast of Maine. Due to the NETC network, those citizens do not have to endure added time and expense to travel to the mainland to receive healthcare, but instead can enjoy quality care without leaving their isolated

and remote islands. The telemedicine services provided include high-definition video, which is rapidly becoming a standard of care for video consults, with minimum quality of service (QoS) guarantees for latency and jitter. QoS connectivity is critical for broadband-enabled telemedicine and is one of the principle benefits of having access to the NETC network.

4. Example - broadband-enabled care models are driving the rapid growth in bandwidth demand:

The Block Island Medical Center located on remote Block Island, Rhode Island is a health care provider that had an expensive and slow 1.5 Mbps T-1 connection. With the help of NETC, the Block Island Medical Center migrated to a 100 Mbps fiber connection to effectively utilize a cloud-based electronic health records (EHR) system. The health care provider was forced to migrate to a cloud-based EHR system because their existing EHR system reached end-of-life and was no longer being supported by their EHR vendor. The Block Island Medical Center could not have remained operational without NETC and the FCC provided subsidies.

5. Funding Year 2018 Annual Report – List of Telemedicine/Telehealth services available to consortium participants participating with NETC.

| Telehealth Applications | Select only applicable (Use the dropdown) |
|--|---|
| 1. Exchange of EHRs | Yes |
| 2. Participation in Health Information Exchange | Yes |
| 3. Remote Training | Yes |
| 4. Adult Echocardiology | Yes |
| 5. Adult Psychiatry | Yes |
| 6. Allergy / Rheumatology / Immunology | Yes |
| 7. Cardiovascular Surgery (Including pre, post surgery) | Yes |
| 8. Chronic Disease Counseling (diabetes, cardiac rehab etc...) | Yes |
| 9. Clinical Pharmacology / Pharmacy | Yes |
| 10. CT and MRI Interpretations (adult and pediatric) | Yes |
| 11. Dentistry (adult and pediatric) | Yes |
| 12. Dermatology (adult and pediatric) | Yes |
| 13. Diabetes Clinical Services (adult and pediatric) | Yes |
| 14. Endocrinology clinical services (adult and pediatric) | Yes |
| 15. ENT (adult and pediatric) | Yes |
| 16. ENT Surgery (including pre, post surgery) | Yes |
| 17. Gastroenterology (adult and pediatric) | Yes |
| 18. General Pediatrics | Yes |
| 19. General surgery (including pre, post surgery) | Yes |
| 20. Genetics and Genetic Counseling (adult and pediatric) | Yes |
| 21. Geriatrics | Yes |
| 22. Hematology (adult and pediatric) | Yes |
| 23. Hospice Services | Yes |
| 24. Infectious Disease / HIV (adult and pediatric) | Yes |
| 25. Intensivist / Intensive Care Unit Services | Yes |
| 26. Interventional Cardiology | Yes |
| 27. Neonatology | Yes |
| 28. Nephrology (adult and pediatric) | Yes |
| 29. Neurology and Neurodevelopmental (adult and pediatric) | Yes |
| 30. Obstetrics / Gynecology | Yes |
| 31. Oncology (adult and pediatric) | Yes |
| 32. Orthopedic Surgery (including pre, post surgery) | Yes |
| 33. Orthopedics (adult and pediatric) | Yes |
| 34. Pathology | Yes |
| 35. Pediatric / Adolescent Psychiatry | Yes |
| 36. Pediatric Echocardiology | Yes |
| 37. Physiatry / Physical Medicine (adult and pediatric) | Yes |

| | |
|---|-----|
| 38. Physical Therapy (adult and pediatric) | Yes |
| 39. Plastic Surgery (including pre, post surgery) | |
| 40. Pulmonology (adult and pediatric) | Yes |
| 41. Primary Care (adult) | Yes |
| 42. Psychological Counseling and Other services (adult and pediatric) | Yes |
| 43. Radiology (adult and pediatric) | Yes |
| 44. Rehabilitation (adult and pediatric) | Yes |
| 45. Routine Adult Cardiology (Includes CHF) | Yes |
| 46. Routine Pediatric Cardiology | Yes |
| 47. Speech Therapy (adult and pediatric) | Yes |
| 48. Substance Abuse Services | Yes |
| 49. Trauma | Yes |
| 50. Wound Care / Decubitus Ulcers (adult and pediatric) | Yes |
| 51. Other (Please type other Telehealth applications) | |