

A Snapshot of Broadband Access in Rural Communities

December 2022

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2M RESEARCH

Broadband internet is an essential medium for the effective and efficient transmission of data, allowing a host of players—across businesses, libraries, schools, hospitals, and local, state, and federal agencies—to deliver health, education, public safety, and other social services to their community (U.S. Department of Agriculture [USDA], n.d.a). Access to broadband promotes opportunities to connect to training resources for workforce development, educational advancement, and economic development (USDA, n.d.a). In areas without adequate access to broadband, residents are unable to fully take advantage of these opportunities. Furthermore, limited access to broadband hinders delivery of critical services like telemedicine, virtual meetings, and access to online applications and resources. This ultimately results in communication challenges and unmet need. According to Busby, Tanberk, and BroadBand Now Team (2020), as many as 50 percent of rural Americans lack access to broadband.

Key Findings

- Rural counties in the United States, particularly in the Delta and Native Lands regions, experience limited access to broadband internet.
- Inadequate access to broadband internet is a significant barrier to both rural county residents and human services providers. In the wake of COVID-19, this lack of access has further widened the “digital divide” (i.e., unequal access to digital technology between rural and urban areas) as human services programs, like many other aspects of American life, have moved to hybrid or virtual models of service delivery.
- Respondents often expressed frustration with funding limitations that prevent programs from providing direct support to a client’s immediate needs (e.g., providing transportation support, broadband access, housing repairs, or childcare funding). Financial flexibility and community partnerships could significantly reduce barriers to broadband access.

This brief draws on findings from our interviews with human services staff to describe broadband access in rural areas, clarify how limited access is a significant barrier to social and economic well-being, and identify opportunities to increase access to broadband through human services programs in rural contexts. While it was not our goal to compare rural and non-rural contexts, some of these findings may also apply to non-rural contexts. Nevertheless, these findings are of particular importance to rural contexts, given the impact of ongoing challenges like limited broadband and transportation in rural communities. The intended audiences of this brief include broadband access providers, human services practitioners, federal program officers, and policymakers.

Human Services Programs in Rural Contexts Study

This brief is part of a study focused more broadly on human services programs in rural contexts. Through a mixed methods research design that includes administrative and secondary data alongside 12 site visits, in tandem with engagement from human services practitioners and other subject matter experts, this project achieved the following: 1) provided an in-depth description of human services programs in rural contexts; 2) determined the remaining need for human services in rural communities; and 3) identified opportunities for strengthening the capacity of human services programs to promote the economic and social well-being of individuals, families, and communities in rural contexts. The study examined several human services programs administered by the U.S. Department of Health and Human Services, including Healthy Marriage and Responsible Fatherhood (HMRF); Maternal, Infant, and Early Childhood Home Visiting (MIECHV); Health Profession Opportunity Grants (HPOG); Temporary Assistance for Needy Families (TANF); and other programs focused on early childhood development, family development, employment, and higher education and technical training.

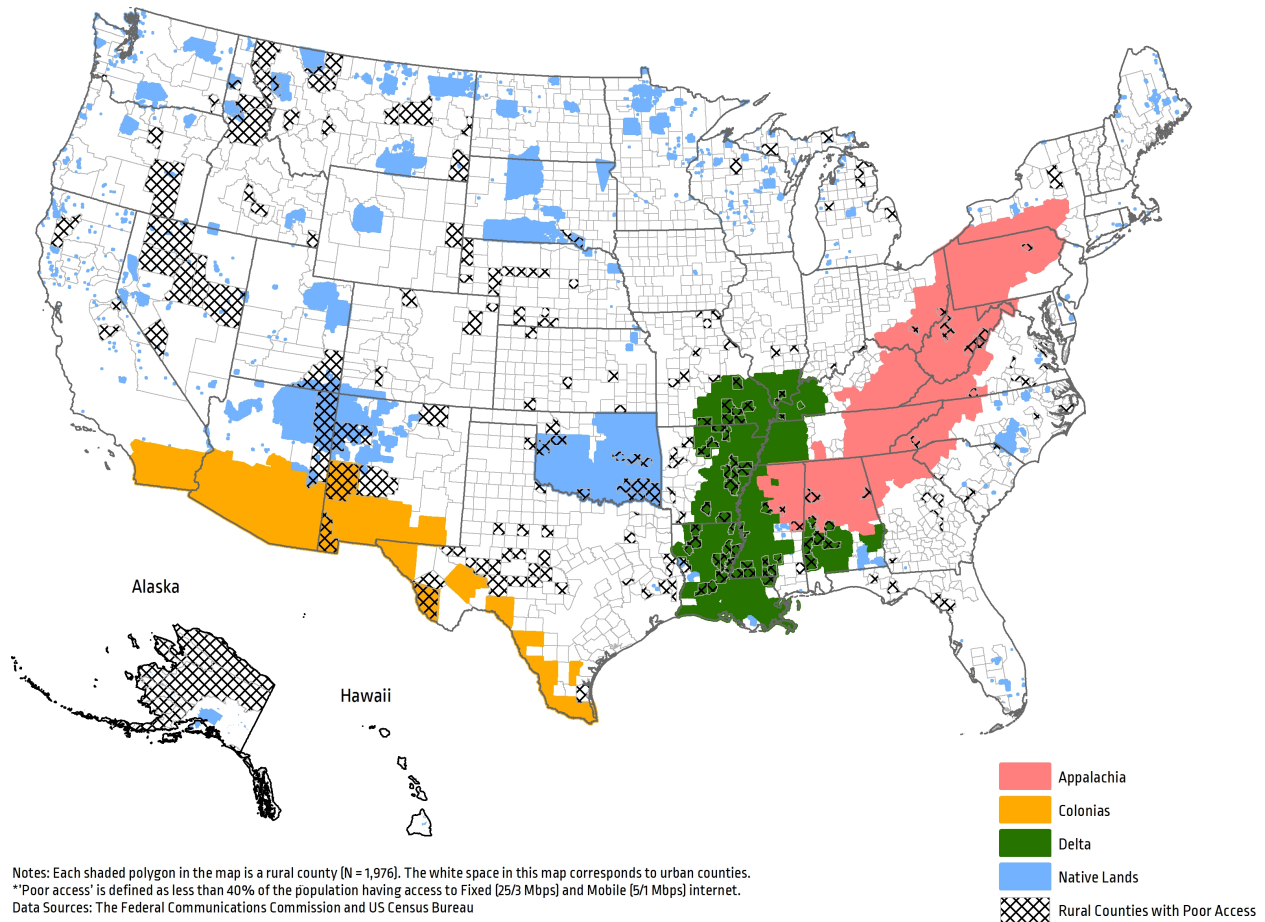
Rural Regions Experience Limited Access to Broadband Internet

According to the 2021 Federal Communications Commission (FCC) *Broadband Deployment Report*, at least 17 percent of the U.S. population lack access to a service speed of 25/3 megabytes per second (Mbps). With 25/3 Mbps, the FCC *Household Broadband Guide* (2020) states that up to four devices at a time can be in “light use” (across basic functions like email, browsing, basic video, Voice over Internet Protocol, internet radio) and up to three devices can be in “moderate use” (across basic functions plus one high-demand application like HD video streaming, multiparty video conferencing, online gaming, or telecommuting). Between 22.3 percent and 50 percent of all Americans living in rural areas have poor access to broadband¹ (Busby, Tanberk, and BroadBand Now Team, 2020; Federal Communications Commission [FCC], 2020; Meinrath et al., 2019).

Broadband internet availability varies according to location, with population density playing a key role (Reddick et al., 2020). According to Patrick et al. (2021), low-density areas “raise technology deployment costs and make the investment less profitable, making it less likely that rural communities have providers offering fixed broadband services.” Exhibit 1 shows a map of the 240 rural counties with poor access to broadband internet, overlaid with four key rural regions using data from the FCC 2018 *Broadband Deployment Report*. Those rural areas with the most limited access to broadband internet include the Delta region (comprising counties in an eight-state region in the Southeastern United States) and Native Lands (comprising a combination of American Indian reservations, trust lands, tribal jurisdiction statistical areas, tribal designated statistical areas, Alaska Native Regional Corporations, and Alaska Native Villages).

¹ A county has “poor access to broadband” when less than 40 percent of the county’s population has access to fixed (25/3 Mbps) and mobile (5/1 Mbps) internet.

Exhibit 1: Counties with Poor Access to Internet



Inadequate Broadband Internet is a Significant Barrier to Social and Economic Well-Being and Human Services Delivery in Rural Contexts

Many needs identified in the existing literature were confirmed by our interviews with human services program staff across the 12 study sites.² Rural administrators and home visitors we interviewed noted that their clients lacked personal transportation and access to broadband internet or computers, further limiting their access to social interaction, news and events, and important health information. Additionally, the presence of different geographic factors and widely dispersed population centers can increase the time commitment required for travel to jobs and sites providing human services. While the COVID-19 pandemic has increased opportunities for some individuals to work and access human services remotely, this assumes the availability and accessibility of reliable broadband internet.

² Lake County, MT; Costilla County, CO; Bethel Census Area, AK; Starr County, TX; Montgomery County, KS; Marshall County, IA; Wilcox County, AL; Georgetown County, SC; Magoffin County, KY; Gallia County, OH; Hamilton County, NY; Clinton County, PA.

Inadequate broadband internet negatively impacts human services delivery in rural contexts.

Many program staff we interviewed expressed that access to broadband internet is not always reliable for those living in rural communities. In the wake of COVID-19, this lack of access has further widened the “digital divide” (i.e., unequal access to digital technology between rural and urban areas) as human services programs, like many other aspects of American life, have moved to hybrid or virtual models. One Tribal TANF staff member explained that telehealth, a much-needed service for their area, was in greater demand after the onset of the COVID-19 pandemic. However, it was difficult to meet this greater demand with their community’s limited broadband infrastructure. The staff member noted that if participants “don’t have internet capability, [staff] can’t be successful in communicating with people in communities that are having health crises.”

Funding amount and allocation impacts program capacity to overcome barriers, such as access to broadband internet.

Across our interviews, respondents reported that funding is a predominant factor influencing a program’s capacity to deliver human services. Program staff expressed two frustrations related to limitations with funding; first, the amount of funding programs receive is not sufficient to meet the remaining need of rural communities. Second, a lack of agency in deciding how funds should be spent hinder program staff’s ability to provide direct support to their clients’ immediate needs. Broadband internet is a chief example, as program staff explained that with greater spending flexibility, they could directly address a client’s lack of access to broadband internet by purchasing hotspots, cellphone minutes, and other related products. Without greater spending flexibility, respondents reported barriers to internet access will remain persistent, particularly in rural areas with few or no internet options and higher internet costs compared to non-rural areas. Current broadband supports, such as hotspots and public facilities, are currently insufficient to meet the need.

A lot of libraries now are designed to offer internet access free to communities. So that’s also been helpful, but the bigger problem is broadband [access] and that’s something that needs to get worked out on the state level.

-MIECHV Program Staff

Staff from each of the programs we interviewed stated that community areas, such as libraries and schools, help rural residents to gain access to broadband by offering free internet access to the community. However, due to compounding barriers such as lack of transportation and long travel distances, these efforts can sometimes fall short. Several staff noted that while some programs offer mobile hotspot units temporarily to rural residents without broadband access in their own homes, this effort is inconsistent and unreliable due to funding constraints and a limited number of available hotspots.

Opportunities for Increasing Access to Broadband through Human Services Programs in Rural Contexts

The COVID-19 Pandemic both highlighted the need for greater broadband internet access and spawned additional governmental and community support that human services programs can leverage and build upon going forward.

The COVID-19 pandemic led to a boom in virtual learning, working, and socializing. In rural areas this transition was difficult due to limited opportunities to access broadband and the high associated costs. However, the added funding flexibilities afforded to human services programs helped them overcome some of these barriers to broadband internet access. According to respondents, this greater flexibility allowed rural-area programs to better address the broadband access barrier by providing solutions like Wi-Fi hotspots and cellular minutes to participants who needed them.

Internet's always been an issue, but I will say that one . . . that was really brought on by COVID because in-person school . . . the schools had internet. Before COVID, internet was a barrier to maybe doing home assignments so getting homework done, which you could say, we could work around that. We would plan as career coordinators, okay, well why don't you work after school in the lounge for an hour, get your work done before going home? Then when COVID hit, they didn't have that option to be in those schools so they were 100% relying on the internet that they just don't have in the rural communities. And my community itself, we had that with our local school district . . . a lack of internet. One of the things we did is we had Mi-Fis [mobile Wi-Fi hotspots] that we could lend out, which is internet that we paid the monthly bill for. It was about \$30 a month and that was something we used their support service funds for.

-HPOG Program Staff

Other staff members across each of the programs noted that the pandemic highlighted the need for greater broadband access and the necessity for creative solutions. One TANF staff member explained, "We had to set up places in the parking lots of the schools so that the kids could go there and at least get their work done." Other staff members remarked that there must be flexibility to "think outside the box to provide students or somebody with internet services so they can do what they need to do [since] nowadays they got to have internet service . . . [because] if you don't have internet service, you [are] just kind of pretty much [out of luck]."

During the pandemic, these challenges, and solutions have not necessarily been unique to rural communities, nor have their solutions. There has been a general proliferation in the number of hotspots and adaptations to existing internet infrastructure nationwide. According to Byram (2021), "The pandemic illuminated the challenges of higher education during the public health crisis from the standpoints of student success and mental health, the difficulty of broadband connectivity, and access to technology because of the supply chain delays and socioeconomic status of students." To address this need for greater internet connectivity, the U.S. CARES Act provided \$100 million in funds to the USDA's ReConnect program. ReConnect furnishes loans and grants to fund the construction, renovation, or purchase of the

equipment and facilities necessary to provide broadband services to eligible rural areas (USDA, n.d.b). These efforts are encouraging as they demonstrate the widespread understanding of the importance of broadband internet access and show meaningful federal effort in addressing these barriers.

Similarly, public and private educational institutions attempted to address barriers in broadband internet access during the pandemic. According to Craig Cowden, the Chair of the Psychology Department in Tacoma Community College, their institution bought hundreds of laptops and Wi-Fi hotspots for students and projected Wi-Fi to several of the campus parking lots so students could connect their devices to the internet for free (Byram, 2021). By examining similar methods to overcome internet barriers across the country during the COVID-19 pandemic, rural areas could incorporate the most successful strategies into their own service delivery models.

Flexibility in using federal funding could allow rural human services programs to tailor service delivery in necessary and cost-effective ways.

Extending the temporary use of money for broadband and technology [...] so that they could do virtual classes because of the pandemic . . . allowing programs to buy cell phones or cell phone minutes . . . I think that that would be really helpful.

-HMRP Program Staff

One common view staff expressed across each program of focus was the need for funding flexibility to address service barriers. Having the financial support to purchase, maintain, and support internet access would be greatly beneficial to rural communities. Outside of broadband internet, flexible funding would give human services programs the ability to meet the unique needs of people in rural communities. For example, program staff mentioned other ways in which flexible funding could serve to improve capacity such as covering staff salaries, transportation support, and one-time provisions of critical services to clients.

There is opportunity for more complete data collection with broadband access.

Data on broadband access are lacking, particularly for rural communities. For example, this brief uses data from the FCC 2018 *Broadband Deployment Report*³ to show a map of the 240 rural counties with poor access to broadband internet. However, limitations of the FCC's broadband access data reveal that the methods behind measuring access have changed over time. As a result, the lack of consistency in data collection prevents access comparisons over time. This presents future researchers with the opportunity to collect better data in order to paint a clearer picture of how access has changed over time.

Another limitation of the broadband data is that access is measured at the census block level. This means that if one person has access to high-speed internet, the entire block is coded as having access, which implies that the data likely does not capture all gaps in coverage (FCC, 2022). While many people are coded as having access to high-speed internet, the data does not tell us how many people are paying for and receiving internet access. Accordingly, we expect that many low-income families are unable to afford high-speed

³ The pre-production draft of the [FCC's new broadband maps](#) that address some of these limitations was released at the time of this brief's publication but was unavailable at the time we conducted the study.

internet even if they technically have access to it. This presents researchers with the opportunity to collect better data to establish a clearer picture of those with and without access. The currently available data is limited in its ability to capture information on access consistently across time as well as on an individual and household level. Further research is therefore needed to produce broadband data that provides a clearer picture of who has access and how access has changed over time. Such data could uncover successful strategies that could help rural counties overcome inadequate internet access.

Partnerships with nongovernmental providers with more diverse funding sources can fill gaps and overcome restrictions faced by human services programs.

Nonprofits and charitable organizations can leverage additional funding from the community. So those people who are philanthropic in nature or driven to do service within their community through either time, talent, or financial resources, we are able to leverage that, and basically add to what federal or state funding we get.

-Staff from Community Partner Agency

Some program staff highlighted the importance of forming partnerships with nongovernmental human services providers not tied to federal funding. Such partnerships can fill gaps such as those with broadband internet. Because these partners may not have the same funding restrictions, they are more likely to be able to assist in ways that government programs cannot. This funding flexibility is highly desirable, and these types of partnerships can provide that necessary flexibility.

Conclusion

Overall, the study's interviews with program staff provided key insight into how broadband internet access allows the four programs of focus to deliver services in rural contexts and potential areas of improvement. Among the challenges impeding service delivery, program staff have routinely highlighted inadequate broadband access in rural areas as a significant barrier. Although some measures are in place to help rural areas reduce this barrier, our conversations with program staff have found these efforts to be unsustainable. Staff attributed the difficulty in helping participants overcome this barrier to a host of reasons including a lack of funding; a lack of flexibility in how programs can spend funds; the high cost of broadband in rural areas; and the lack of overall access to broadband providers. These programs have attempted to make adaptations to service delivery according to participants' needs by providing hotspots, funding cellular minutes, and informing participants of additional resources within the community. This brief highlights opportunities for increasing access to broadband through increased flexibility in funding restrictions, better data collection on broadband access, and greater government and community support in addressing this barrier to human services delivery.

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Acknowledgments

This brief was funded by the Office of Planning, Research, and Evaluation (OPRE), Administration for Children and Families, U.S. Department of Health and Human Services, under contract number HHS 7500119F37004. 2M would like to acknowledge the Federal Leadership Team—Aleta Meyer and Lisa Zingman from OPRE, and Aira Jae Etheridge from the Health Resources and Service Administration (HRSA)—who offered invaluable feedback in the development and review of this brief. Additionally, we would like to acknowledge the contributions of Heather Hahn, Corianne Scally, Amelia Coffey, and Anna Morgan from the Urban Institute, who were partners in designing and implementing the study, including activities related to data collection and qualitative thematic analysis.

Suggested Citation: Cain, A., E. Ward, J. Murdoch, and N. Chakraborti. 2022. *A Snapshot of Broadband Access in Rural Communities*. OPRE Brief #2022-316. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

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