

The Last Mile: COVID-19, Telehealth, and Broadband Disparities in Rural Indiana

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Abstract: *This critical review of literature evaluates the impact of COVID-19 on health and mental health care delivery in rural Indiana, specifically the move to increased telehealth services. Telehealth has been a mostly positive experience for patients and providers. However, many Indiana residents are without the option of telehealth due to underdeveloped infrastructure that is necessary to support broadband access. This disparity is evidence of a larger social and health justice issue and illuminates a call to action for social workers on all levels to collaborate with community members, government agencies, and local programs to push the issue towards the public health arena and to promote broadband access as a human right.*

Keywords: *COVID-19; telehealth; broadband; access; rural; Indiana; infrastructure; disparities*

People living in rural America often lack accessible health and mental health care (Centers for Disease Control and Prevention [CDC], 2017a; Probst, 2020). Specialty care is over 60 miles away for more than half of rural patients (Morgan, 2020). Facilities that do exist in rural areas are frequently underfunded and understaffed (Indiana State Rural Health Plan [ISRHP], 2012; Morgan, 2020). The COVID-19 pandemic has been calling attention to the question of access to healthcare and mental health services, both for mitigation concerns, and especially for protecting higher-risk patients. Indiana has made a rapid and strong mobilized effort to address these concerns, with telehealth being the predominant response (Cohen & Monte, 2020). However, due to the lack of access to reliable, affordable, and fast enough internet, rural patients have not been receiving all of the intended benefits of telehealth. This exposes rural patients to concerning situations such as not having adequate access to care due to some providers going fully virtual during the pandemic, or having to potentially risk their health by needing to find a face-to-face care provider. Telehealth is illuminating a lack of equitable internet access and infrastructure in rural areas, which needs to be addressed as a social and health justice issue.

The current national ratio for mental health providers to residents is 30 psychologists per 100,000 residents and 15.6 psychiatrists per 100,000 residents (Good Therapy, 2020). In rural areas, this average drops to 9.1 psychologists (Resnick, 2020) and 3.4 psychiatrists (Good Therapy, 2020). The state of Indiana is experiencing rural healthcare discrepancies. To put Indiana in perspective, 72 out of 92 counties in the state are rural and 34% of the population live in these counties (Prior, 2014). Additionally, the ISRHP (2012) reported “26 rural counties in Indiana are partially or completely medically underserved or have shortages of health professionals” (p. 9). Indiana is medically underserved in general, as the physician-to-patient ratio is 66.9 physicians per 100,000 residents for the entire state, which is less than the national average of 75 per 100,000 residents (Federal Communications Commission [FCC], 2017). Most of the physicians in the state are

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concentrated in larger, metropolitan areas (ISRHP, 2012), leaving a large gap in care for rural patients.

Method

This research was conducted primarily from August to December, 2020. EBSCO databases were used and searches included the terms “rural,” “telehealth,” “COVID-19,” and “Indiana.” The Rural Health Information Hub database (2021) was also used and included searches through the database state guide for Indiana and by topic under “Rural Response to COVID-19” and “Telehealth.” Due to the emerging nature of the topics in this paper, grey literature was also reviewed. The grey literature included federal and state government websites, community organization websites, and webinars and trainings for communities and practitioners.

The Rise of Telehealth in Indiana

Telehealth is defined by the Center for Connected Health Policy (CCHP) as “a collection of means or methods for enhancing health care, public health, and health education delivery and support using telecommunications technologies” (CCHP, 2018, para. 1). The Center expands this definition further by stating, “while ‘telemedicine’ has been more commonly used in the past, ‘telehealth’ is a more universal term for the current broad array of applications in the field. Its use crosses most health service disciplines, including dentistry, counseling, physical therapy, and home health, and many other domains” (para. 2). The state of Indiana defines telehealth as “the use of telecommunications and information technology to provide access to health assessment, diagnosis, intervention, consultation, supervision and information across a distance” (Upper Midwest Telehealth Resource Center [UMTRC], 2020, p. 1).

The governor of Indiana, Eric Holcomb, declared a public health emergency on March 6, 2020, after the first official COVID-19 diagnosis in the state. He also mandated stay-at-home orders on March 24. By April 3, the National Association of Social Workers’ Indiana chapter (NASW-IN) had already put together a comprehensive webinar training on how social workers and healthcare providers could respond to these situations with the expedited legislative changes that had been made in the state (Cohen & Monte, 2020). This mobilization demonstrated the ability of advocates to be informed about the changes and to get the information out to providers and communities quickly. Some of the legislative changes include the Indiana Family and Social Services Administration (FSSA) suspending the requirement for services being delivered face-to-face and allowing for the “increased use of telehealth for statewide services such as Medicaid-covered services, mental health services, and substance use disorder treatment and prescribing” (Cohen & Monte, 2020, slide 10). Another major change relates to professional licensure of providers. The public health emergency provisions for Indiana include the state’s Professional Licensing Agency suspending requirements for healthcare practitioners to have Indiana state licensure. Practitioners may provide services to Indiana residents, as long as the practitioners are licensed and in good standing in another state (Cohen & Monte, 2020).

Additionally, Indiana Code 27-13-7-22 requires telehealth parity from insurance providers. This means telehealth services are to be reimbursed at the same rate as face-to-face services (Cohen & Monte, 2020). When originally written, Indiana telehealth law did not include telephone services. This element was overruled by state emergency COVID-19 legislation. Verbal (not text or email) telephone communication with patients is now a temporarily covered service that is reimbursed at a reduced rate by insurance (Indiana Health Coverage Program [IHCP], 2020; UMTRC, 2020). However, phone-only services are limited in providing context for the patient and provider, including body language and other cues, as well as the human connection that video services attempt to create (Kennedy et al., 2020). These legislative changes are meant to reduce, if not eliminate, barriers for practitioners to conduct telehealth services regardless of location or patients' insurance provider.

Common telehealth approaches during COVID-19 have been using internet video platforms (e.g., Webex and Doxy) to conduct assessments, counseling and physician appointments, COVID-19 symptom evaluation, and other telehealth services. Other platforms that are more familiar to people who are already using the internet, such as Zoom, FaceTime, and Skype, have also been used. These platforms were previously prohibited for telehealth use due to confidentiality concerns. They have been temporarily allowed as part of the COVID-19 response, as long as providers put forth a good faith effort to maintain confidentiality (Fishpaw & Zawada, 2020). "Good faith effort" in this case indicates providers must inform patients of potential privacy risks, must use privacy modes and encryption settings, and must use non-public facing platforms (i.e., those that cannot be publicly broadcast; US Department of Health and Human Services [USDHHS], 2020b).

Funding Telehealth in the Pandemic and Beyond

The rise in telehealth services, and the pandemic response in general, has not been without financial burden on healthcare providers and facilities. To address this, the federal government passed some of the fastest relief legislation in history, with only two months from appropriation to money being awarded (Martinsen, 2020). For rural areas, this is being addressed on the federal level by the Health Resources and Services Administration's Federal Office of Rural Health Policy (Martinsen, 2020; Morgan, 2020). Relief legislation includes \$10 billion for rural healthcare facilities through the Coronavirus Aid, Relief, and Economic Security (CARES) Act, the Paycheck Protection Program, and the Health Care Enhancement Act (Martinsen, 2020). At least \$500 million has been designated specifically for enhancing telehealth in rural areas, including expanding infrastructure (Morgan, 2020). On March 31, 2020, the FCC established a \$200 million emergency COVID-19 Telehealth Program (FCC, 2020) to "help eligible health care providers purchase telecommunications services, information services, and devices necessary to provide critical connected care services" (p. 3). The USDA also allocated \$125 million for rural telehealth development (Morgan, 2020).

Other federal funding streams and programs beyond pandemic allocations address telehealth expansion. One program is Project OVERCOME, funded by the National Science Foundation (NSF) in October 2020. Project OVERCOME provided \$1.945 million

to bring broadband to underserved areas, including rural areas (US Ignite, 2020). The United States Agricultural Department (USDA) also has a rural development grant that offers “Telecommunications Infrastructure Loans & Loan Guarantees funding” (USDA, n.d.). The FCC offers rural broadband funding through various programs, including the Rural Health Care Program and the Rural Digital Opportunity Fund. In a joint effort, the United States Department of Health and Human Services (USDHHS), USDA, and the FCC all signed a Memorandum of Understanding for Planning a Rural Telehealth Initiative on August 31, 2020, stating they will work together to expand broadband to rural communities (USDHHS, 2020a).

In the state of Indiana, programs have been created to increase broadband access in rural areas. Next Level Connections is an infrastructure program put into place by Governor Holcomb. The program offers \$70 million in grant funding to improve rural broadband capacity and will be overseen by the Office of Community and Rural Affairs (OCRA). The program recognizes that “affordable, high-speed broadband has become a business, educational, and personal necessity” (OCRA, 2020, para. 2). Additionally, the Indiana Rural Health Association (IRHA) is currently working to expand telehealth to rural communities through the Crossroads Partnership for Telehealth. This program partners with the Richard G. Lugar Center for Rural Health and four rural hospitals in southern Indiana to assist patients with access to care through telehealth services (IRHA, 2019).

Benefits of Telehealth

During the pandemic, telehealth services have increased in healthcare systems across the United States exponentially. Some reports found increases up to 845% (Jaffe et al., 2020) and even 4,300% (Fishpaw & Zawada, 2020). While many providers did not know what to expect with the increase in telehealth, it has actually shown great promise. As telehealth use increased, many practitioners observed a decrease in no-show rates (Resnick, 2020). Some practitioners reported the temporary eases in telehealth regulations made it easier to reach underserved populations (Glenn, 2020). Telehealth eliminated the transportation barrier for patients, which contributed to the ability to reach more people (Dearinger, 2020; Resnick, 2020). Providers also found that patients with anxiety and depression were more likely to use telehealth services during the COVID-19 pandemic (Jaffe et al., 2020). This may be due to many clients feeling more comfortable getting services while staying in their own home (Resnick, 2020).

In Indiana specifically, Sklar and colleagues (2020) surveyed 93 practitioners across six Community Mental Health Centers throughout the state. The CMHCs were contracted through the Indiana Division of Mental Health and Addiction to provide Evidence Based Practices (EBPs). Because of the COVID-19 pandemic, EBPs became telehealth appointments. Per the results of the surveys, providers found more willingness from clients to engage in telehealth instead of in-person appointments. The majority of providers found their organizations’ transitions to telehealth to be positive and felt confident in their ability to provide services via telehealth (Sklar et al., 2020).

Not only has telehealth use for previously existing services increased dramatically, but the types of services now being delivered have also expanded. In neighboring Michigan, a rural hospital system has been using telehealth to provide triage, assessments, and opportunities for employees to work from home (Hirko et al., 2020). This both prevented unnecessary face-to-face contact and saved the use of personal protection equipment (PPE). To the south of Indiana in rural Kentucky, Dearing (2020) reported local health departments were forced to reduce in-person services during COVID-19. Through telehealth and innovative thinking, the local health departments diversified and expanded the types of services they provided, including smoking cessation, diabetes management, and health education. The health departments were able to reach more residents with these services.

Several providers share the perspective that returning to the pre-pandemic/pre-telehealth status quo would be unacceptable, especially because so many more people have been able to access services via telehealth during the temporary pandemic legislation (Resnick, 2020). Initial suggestions for how to maintain current pandemic-level telehealth services are offered by Fishpaw and Zawada (2020). These suggestions include a push to continue temporary pandemic legislation that has been enacted, such as cross-state licensure portability, insurance reimbursement, and good faith use of potentially non-confidential platforms. Glenn (2020) echoes concerns about the temporary nature of the regulatory changes:

When temporary allowances due to COVID are over and regulations are tightened, we can't revert back to large underserved and rural populations of people not having access to the technology, the adequate Internet access, or telehealth benefits through their insurance policies again. This is a prime opportunity to advocate for everyone to have equitable access to mental health care. (p. 27)

Equitable access is a key concept in this statement and warrants attention.

Broadband Disparity

Technology and internet access have been recent topics of serious discussion for service providers. At the Indiana School Health Network Annual Conference held on June 29-30, 2020, Mark Fairchild (2020) from Covering Kids and Families of Indiana presented updates on school health legislation. During this presentation, he used the term "broadband disparity" to discuss the lack of equal internet access for everyone. In another presentation at the same conference, rural mental health providers discussed using rural schools as sites for micro clinics and telehealth (Crume & Willis-Gidley, 2020). As further confirmation of broadband disparity, the presenters reported having issues with internet connectivity for many of their students and families, especially outside of the schools.

Practitioners have also noticed issues with internet access for their patients as healthcare services transitioned from in-person to telehealth appointments during the pandemic (Dearing, 2020; Glenn, 2020; Hirko et al., 2020; Jaffe et al., 2020; Resnick, 2020; Sklar et al., 2020). Some mental health providers throughout rural Indiana reported being unable to participate in telehealth with every client because the clients lived in rural

areas without access to a stable internet connection, did not have access to internet services with enough capacity for telehealth platforms, or had no access to the internet (Sklar et al., 2020). Sharon Cooley, an outpatient medical nurse practitioner serving patients in Cass and Miami counties located in rural, north central Indiana, discussed the COVID-19 response at her clinic and the use of telehealth services, stating:

They wanted me to do telehealth from my house once a week. I had to laugh because I don't have internet where I live! I came here to the office instead and tried to do telehealth with my patients, but most of them don't have internet either. I ended up calling them on the phone and doing telehealth that way. (S. Cooley, personal communication, September 25, 2020)

In 2004, healthcare providers had already found that rural residents did not have sufficient broadband to effectively engage in telehealth services and medical professionals were advocating for better rural internet access (Schopp et al., 2006). This deficit was still being observed in 2018 (O'Dowd, 2018). A major reason for the deficit is the lack of broadband availability. Availability is reported by the FCC, which is the United States government agency tasked with regulating broadband internet. The agency currently has interactive maps available on their website that demonstrate internet access and can break the data down into rural versus urban, and most interestingly, broadband access overlaid with health issues and physician access (FCC, 2017). According to this map, only 50.8% of residents in rural areas of Indiana have access to fixed broadband service. This refers specifically to broadband speed that is at least 25/3 megabits per second (Mbps), which is 25 Mbps for download and 3 Mbps for upload. This is considered the minimum broadband speed to support video conferencing (Carey, 2020). The other 49.2% of rural residents in Indiana might have access to weaker, slower internet, but unless they have the minimal capabilities, they will not have the necessary broadband to use streaming or video services. The FCC estimates there are just over 1,700,000 rural residents in Indiana (FCC, 2017). When only roughly half of them have sufficient internet access, several hundred thousand residents are left without telehealth options.

Lacking access to telehealth is not the only issue with broadband disparity that rural residents are facing. Hirko and colleagues (2020) noted that during the COVID-19 pandemic and the physical distancing and mitigation strategies that come along with it,

the massive shift to telehealth and reliance on virtual connections in these times of social isolation may have created an additional health disparity for the millions of rural Americans without access to necessary broadband to deploy digital technologies...in a time of widespread social distancing, the lack of broadband access prevents individuals from connecting online with family and friends, and thus may contribute to other adverse health outcomes in rural regions. (p. 1817)

The pandemic has highlighted the broadband disparity experienced by rural residents with consequences likely to continue beyond COVID-19.

Broadband Access as a Public Health Right

Although the COVID-19 pandemic intensified the issue, broadband disparity has been on the radar of global leaders for years. In 2016 “the United Nations General Assembly declared access to the Internet a basic human right” (Sanders & Scanlon, 2021, p. 1). The concept of internet access being a right has been the topic of some research discussions (Bauerly et al., 2019), but there are significant barriers to actualizing universal broadband access in the US. If internet access does become a right, it could be costly to bring improved broadband to rural areas. The material needed for it, fiber optic cable, “is fast and pretty much limitless in capacity, but it is also expensive to install — especially in the last mile, the final bit of connection to a business or home” (Stewart, 2020, para. 11). In rural areas that are geographically spread out, there are often miles between homes and buildings — much of the space between rural buildings and homes is that “last mile.” The majority of broadband infrastructure is left to the private sector, which has often considered it unprofitable to connect broadband to rural areas (Duffy & Tappe, 2020; Hovis et al., 2020). While this could change with the plans President Biden has suggested for bolstering infrastructure (The White House, 2021), privatized broadband currently can leave out homes that corporations find to be too expensive to connect (Duffy & Tappe, 2020; Hovis et al., 2020), furthering rural disparities.

Pandemic mitigation includes reduced face-to-face contact. This has consisted of using telehealth for health and mental health services more than before, as well as working from home, attending school through virtual and hybrid lessons, and purchasing goods online. Rural residents cannot benefit from these options if they do not have access to strong enough broadband connections. This reduces their ability to engage in mitigation practices and unjustly puts them at higher risk during a pandemic. With government legislation, providers and patients who do have adequate internet access are all rallying around the services offered by telehealth. Telehealth is obviously significant and helpful. Lacking infrastructure should not have to be a reason rural residents cannot access such services. In the 21st century digital world, both information and many vital services such as telehealth are now online. Adequate access to the internet has become critical. Equitable access is not only a timely public health issue, but also the “civil rights issue of the 21st century” according to the late Congressman John Lewis (Sallet, 2020; Washington Post Live, 2020).

Implications for Social Workers

Social workers are integral to addressing civil rights issues. Championing internet access as a civil rights issue is no exception. The National Association of Social Workers (NASW) and Association for Social Work Boards (ASWB) released a Standards for Technology and Social Work Practice guide dating back to 2005 (NASW & ASWB, 2005). Including standards for access (Standard 2) and community practice (Standard 9-2), this publication addressed both the digital divide and the call to action for social workers to advocate on behalf of “all members of the community” (NASW & ASWB, 2005, Community Practice section) to have equitable access to technology. NASW and ASWB updated these standards in 2017, featuring more organizations and technological

advancements (NASW et al., 2017). This update addressed equitable access in Standard 2.21, Access to Technology, stating: “Advocating for access to electronic services is part of social workers’ commitment to social justice” (NASW et al., 2017, p. 26). These publications are just one indication that social work as a profession is and has been committed to promoting broadband equity.

Although the impact of COVID-19 on internet access for healthcare is still being assessed, it is imperative to not simply wait for all the research to be collected and analyzed before taking action. The data already indicates this is a critical time to drive local, state, and federal policy to place importance on developing infrastructure and improving broadband access for rural communities. Existing programs and current funding streams lay some groundwork to bridge the digital divide found in rural broadband access. This work needs a push to move it further into the realm of public health and even into public utilities, as broadband access is becoming as essential to modern life as other public services.

Government officials often make policies and programs from where they are positioned, which is not always directly involved in the situations their legislation impacts. They need input from communities and help from grassroots organizations in those communities to deploy rural broadband improvement ideas. This is a situation ideally suited for social workers, especially those in macro and policy work who can come alongside their mezzo and community-based colleagues as well as their micro and practitioner colleagues to forge real change. Social workers can join government agencies, non-profits, community organizations, and service providers to address broadband disparity as a significant social and health justice issue.

For example, macro-level social workers involved in policy can work with legislators to identify and eliminate laws that potentially inhibit rural broadband growth (e.g., internet services being predominantly in the private sector). Social workers can promote sound and just policies that include community collaboration to build infrastructure. At least one county in Indiana is already doing this. Through their Rural Electric Membership Cooperative (REMC), Jasper County is working to increase broadband infrastructure and is doing so as a non-profit agency (Pete, 2020). This is an emerging issue that warrants further exploration, especially for social work involvement. Macro-level social workers also have a prime opportunity to advocate for making temporary pandemic telehealth legislature more permanent, as researchers have advised (Fishpaw & Zawada, 2020; Glenn, 2020).

Mezzo-level social workers can use their community-based organization skills to collaborate with broadband expansion program administrators and the communities these programs serve. One example of this is the Regional Telehealth Resource Center Program, overseen by the US Health Resources and Services Administration (HRSA). This program is designed to provide federal and regional support to rural communities regarding telehealth implementation (USDHHS, 2020c). Mezzo-level social workers are an excellent resource for this type of project, as their training and experience help them bridge potential gaps in communication, education, and action between government and communities. Social workers can advocate for equitable internet access by identifying and joining such

projects.

Clinical social workers and others who are in micro-level social work practitioner roles are the ones on the ground who intimately know what is happening with clients and telehealth. By providing direct services, these practitioners know what is working and what is not. Unfortunately, it is the experience of some clinical social workers that they are left out of conversations regarding policies and programs that affect their clients. Amanda McKinley, a Licensed Clinical Social Worker (LCSW) serving in east central Indiana, reported:

Social work practitioners are often hidden and unseen. We show up, do our job, and make a difference. Policies often stifle our ability to help people. The temporary pandemic legislation made telehealth easier, and my patients have not only liked it, but have needed it. This is a golden opportunity to advocate for permanent policy changes that allow us to help our patients. (A. McKinley, personal communication, December 11, 2020)

McKinley also stated macro, mezzo, and micro social workers need to work together to advocate for such changes, but that she has not been approached by any macro- or mezzo-level social workers, and would not know who to connect with to start such conversations.

This is a considerable lapse in intra-professional communication that social workers can remedy. It is important for social workers on all levels to work together. Macro and policy level social workers can do more to actively seek out and collaborate with their community-based and practitioner counterparts to determine how to best support communities, clinicians, and clients. Cooperation of this kind could be especially helpful to address broadband disparity in light of COVID-19.

Conclusion

Rural health disparities are nothing new. Over the past few years, several studies have revealed that residents in rural areas of the United States tend to be sicker, older, poorer, less educated, and have less access to healthcare than their urban counterparts (CDC, 2017a, 2020; Dearing, 2020; Fairchild et al., 2020; Hirko et al., 2020). In fact, the CDC reported in 2017 that rural residents die more often from leading causes of death (CDC, 2017b). These findings were all pre-pandemic. Many of the reasons for the disparities include lack of infrastructure, such as transportation and nearby facilities (CDC, 2020; Morgan, 2020). COVID-19 is a major event that is illuminating these issues, especially the disparities in internet access. As COVID-19 has taught us, telehealth has been a robust answer to providing outpatient medical and mental health care in underserved rural areas; however, telehealth can only be as robust as infrastructure and access allow it to be. While this research focused mainly on Indiana, the issue of broadband disparity is certainly not exclusive to just one state. These examples of social work involvement could be applied to various states and, in some cases, on the federal level as well. The National Quality Forum (NQF; 2020) started a Rural Telehealth and Healthcare System Readiness Committee that is scheduled to meet throughout 2021. This Committee indicated it will seek input from community members and service providers, including social workers (NQF, 2020). With

input and collaboration from social workers on all levels, perhaps the Committee will determine that it is worth the necessary funding to publicly expand infrastructure into the last miles of the old dirt roads in rural America. This could allow rural communities to have internet access as a public utility – and a modern human right.

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