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# Telehealth and Health Information Technology in Rural Healthcare

The use of technology in healthcare delivery can assist healthcare systems, organizations, and providers in expanding access to and improving the quality, safety, and effectiveness of rural healthcare. Using **telehealth** in rural areas to deliver and assist with the delivery of healthcare services can reduce or minimize challenges and burdens patients encounter, such as transportation issues related to traveling for specialty care. Telehealth uses telecommunications technology and other electronic data to conduct and supplement clinical healthcare services — including education, administrative functions, and professional consultations — provided at a distance. **Health information technology** (HIT) uses technology to store, secure, retrieve, and transfer protected health information electronically within healthcare systems and community settings. Together, telehealth and HIT can improve monitoring, timeliness, and communications throughout the healthcare system.

Telehealth became a more prominent mode of providing healthcare during the COVID-19 pandemic, when patients and providers sought to decrease in-person contact for routine visits. In order to expand access to telehealth from patients' homes and increase provider flexibility, laws, reimbursement policies, and regulations were temporarily changed through emergency orders and legislation. Some of these policy changes at the state and federal level have become permanent or extended beyond the COVID-19 public health emergency (PHE), while others have ended.

This guide provides an overview of telehealth and HIT in rural America to help healthcare providers find information related to implementing telehealth and HIT programs and services, and highlights funding opportunities and other initiatives to support services. Challenges for maintaining HIT systems and providing telehealth services in rural areas are also discussed, such as workforce issues, quality of care concerns, reimbursement, licensure, and access to broadband services.

## Frequently Asked Questions

- How does technology improve healthcare access and quality of care in rural communities, and what types of services have proven to be effective?
- What is the difference between telemedicine and telehealth?
- What is the relationship between HIT and telehealth?
- What is digital health literacy, and how does it impact patients' ability to access health information and telehealth services?

### Telehealth

- What do we know about telehealth use in rural areas?
- How does the use of telehealth impact rural healthcare providers, facilities, and communities?
- How is telehealth used to reach patients in their homes?
- What are the challenges related to providing telehealth services in rural communities?
- What facility, technology, and staffing considerations are important when implementing telehealth services?
- How do Telehealth Resource Centers (TRCs) help rural healthcare facilities develop telehealth services?
- How did the COVID-19 pandemic affect telehealth policy?

- Where can I find information on my state's telehealth policies?
- What are some telehealth funding programs for rural providers?

### **Health Information Technology**

- What is interoperability and how does it work for providers and patients?
- Are HIT solutions such as EHRs widely used in rural facilities?
- What are considerations for rural facilities when implementing and upgrading HIT systems, including working with vendors?
- Why is cybersecurity an important issue for rural HIT?
- What facility, technology, and staffing concerns accompany HIT, and what skill sets are necessary?

### **Broadband**

- Why is broadband important for telehealth and HIT? How can we tell if broadband is available in our community?
- We have limited broadband in our area. What are our options?

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## **How does technology improve healthcare access and quality of care in rural communities, and what types of services have proven to be effective?**

Technological advances have allowed healthcare providers and organizations to optimize healthcare delivery and have the potential to close gaps in access to care, allow efficient and secure sharing of health records, and increase opportunities for training and quality improvement.

Health information technology (HIT) gives patients the opportunity to engage in the provision of their healthcare by tracking health conditions, accessing provider visit notes, and viewing test results. HIT has documented positive effects on the efficiency and effectiveness of healthcare delivery. The 2018 article Health Information Technology Continues to Show Positive Effect on Medical Outcomes: Systematic Review (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5818676/>) found that over 80% of the reviewed literature documented positive medical outcomes associated with HIT. HIT is also used to track and report quality data, which is an important component of value-based payment models such as Accountable Care Organizations (ACOs), the Quality Payment Program (QPP), and state Medicaid programs. For more information, see How can the use of health information technology (HIT) and telehealth impact the quality of care delivered in rural areas? (<https://www.ruralhealthinfo.org/topics/health-care-quality#telehealth>) in our Rural Health Quality topic guide.

Telehealth services allow rural healthcare providers to offer quality healthcare services locally and at lower costs through e-visits and virtual visits, enabling rural patients to access necessary healthcare without traveling long distances. Telehealth services can also promote healthcare quality by enabling rural providers with limited access to specialist colleagues to address a broader range of medical conditions through consultation and collaboration. Rural healthcare facilities may also find it more practical to use telehealth to provide specialty services rather than having specialty and subspecialty providers on site. As a result, telehealth can allow facilities to improve access and make a wider range of healthcare services available, including:

- Audiology
- Cardiology
- Dentistry
- Dermatology
- Mental health and substance use disorder (SUD) services

- Obstetrics
- Oncology
- Ophthalmology
- Radiology

In addition, [Examining Rural Hospital Bypass for Inpatient Services](#)

(<https://www.cms.gov/files/document/ruralhospitalbypassfinalreport.pdf>), explains that avoiding rural hospital bypass and patient transfers when care can be provided locally is critical for hospital and provider viability in rural areas and keeps beds open for patients in need of critical care at tertiary care centers.

#### Use of Telehealth During the COVID-19 Era

([https://effectivehealthcare.ahrq.gov/sites/default/files/related\\_files/use-telehealth-during-COVID-19-systematic-review.pdf](https://effectivehealthcare.ahrq.gov/sites/default/files/related_files/use-telehealth-during-COVID-19-systematic-review.pdf)), a January 2023 literature review of more than 300 studies, analyzes the characteristics of the patients, providers, and health systems using telehealth during the COVID-19 era, discusses what is considered a successful telehealth intervention, and describes strategies used to implement these interventions.

Healthcare services and programs effectively provided with telehealth platforms in rural communities include:

- **Chronic care management interventions** using telehealth to provide patients with access to integrated care during their primary care visits.
- **Provider-to-provider education models** such as the [Project ECHO® – Extension for Community Healthcare Outcomes](#) (<https://www.ruralhealthinfo.org/project-examples/733>) allow rural primary care providers and specialist providers to share knowledge and manage patient care.
- **E-consults** are a provider-to-provider model to allow providers to share patient records and get recommendations from providers in specialized fields.
- **E-visits** allow patients to communicate with a provider using a secure messaging system, often conducted through an online portal. E-visits can be used to ask a healthcare provider questions about symptoms or emerging acute conditions. Providers may recommend treatment, order prescriptions, or recommend an in-person visit.
- **Virtual visits** allow patients to meet with their provider using real-time, two-way audio-visual communications technology, often through an online patient portal or other secure, HIPAA-compliant platform. Virtual visits may take place instead of, or in addition to, in-person visits. In some cases, audio-only visits may be appropriate. Online therapy and remote counseling, which link rural residents with behavioral health and mental health counseling services, are examples virtual visits.
- **Tele-emergency** services provide real-time two-way video connection to emergency medicine physicians and nurses to help manage emergency situations in rural emergency departments.
- **Remote patient monitoring (RPM)**, also known as remote physiologic monitoring, enables providers to monitor patients' health and manage acute and chronic conditions in between medical visits. [Bridges to Care Transitions-Remote Home Monitoring and Chronic Disease Self-Management](#) (<https://www.ruralhealthinfo.org/project-examples/1016>) is an example of a remote monitoring program that assists patients with chronic disease management and behavioral health conditions in their homes.
- **Tele-intensive care units (ICUs)** provide around-the-clock critical care patient monitoring by a team of subspecialists and critical care nurses.
- **Long-term care** services offered through telehealth can bring specialized care to elderly populations who reside in long-term care facilities in rural areas. [Telehealth Brings Important Services to Rural Long-Term Care Facilities](#) (<https://www.ruralhealthinfo.org/rural-monitor/long-term-care-telehealth>) discusses how telehealth has been used to connect rural long-term care residents to primary care, specialty care, and mental health service.

- **Telepharmacy** extends access to pharmacy services, including medications and medication counseling, at rural healthcare facilities and community pharmacies.
- **Virtual professional communities** connect providers working in isolated areas who can assist with patient care.
- **Interpreter services** can be transmitted on-demand through audio and/or visual technology for patients who speak limited or no English.
- **School-based telehealth** can increase access to pediatric care and, in some cases, increase access to telehealth for the broader community.

For examples of effective and promising programs using telehealth, see our list of [rural telehealth models and innovations](#) (<https://www.ruralhealthinfo.org/project-examples/topics/telehealth>).

## What is the difference between telemedicine and telehealth?

The Health Resources and Services Administration's Office for the Advancement of Telehealth [defines telehealth](#) (<https://www.hrsa.gov/telehealth/what-is-telehealth>) as:

"the use of electronic information and telecommunications technologies to support long-distance clinical healthcare, patient and professional health-related education, health administration, and public health."

Comparing this definition to the usage of "telemedicine," the [Office of the National Coordinator for Health Information Technology \(ONC\)](#) (<https://www.healthit.gov/faq/what-telehealth-how-telehealth-different-telemedicine>) offers this distinction:

"Telehealth is different from telemedicine because it refers to a *broader scope of remote healthcare services* than telemedicine. While telemedicine refers specifically to remote clinical services, telehealth can refer to remote non-clinical services, such as provider training, administrative meetings, and continuing medical education, in addition to clinical services."

Although telehealth is broader in scope, the American Telemedicine Association and many other organizations use the terms telemedicine and telehealth interchangeably. HRSA's [Telehealth.HHS.gov](#) (<https://telehealth.hhs.gov>) offers a [definition](#) (<https://telehealth.hhs.gov/patients/why-use-telehealth>) of telehealth to assist patients in understanding the types of care they can receive using telehealth:

"Telehealth — sometimes called telemedicine — lets your health care provider care for you without an in-person office visit. Telehealth is done primarily online with internet access on your computer, tablet, or smartphone."

[Telehealth.HHS.gov](#) (<https://telehealth.hhs.gov>) also offers [telehealth information and resources for providers](#) (<https://telehealth.hhs.gov/providers>). For additional telehealth definitions, see the Rural Telehealth Evaluation Center's [Telehealth: Current Definitions and Future Trends](#)

(<https://idhi.uams.edu/rtec/wp-content/uploads/sites/4/2022/05/Telehealth-Definitions-Paper-06MAY2022-1.pdf>).

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## What is the relationship between HIT and telehealth?

HIT and telehealth are related and complementary concepts. Both use technology to improve efficiency and the delivery of healthcare services in a healthcare system, albeit in different ways. The Office of the National Coordinator for Health Information Technology (ONC) defines HIT (<https://www.healthit.gov/sites/default/files/pdf/health-information-technology-fact-sheet.pdf>) as a broad term encompassing a compilation of technologies and programs to analyze, house, and share health information. Examples of HIT include electronic health records (EHRs), personal health records (PHRs), e-prescribing, online communities, and online patient and provider communications. HIT can be used to reliably share electronic health records (EHRs) between providers but also to allow patients to access medical history information, data and test results, and other personal health information, often through a portal maintained by the provider or health system. Meanwhile, telehealth allows patients to communicate and visit providers without traveling to see the provider in-person.

HIT and telehealth can be used together to improve healthcare delivery. For example, Utilizing Patient Geographic Information System Data to Plan Telemedicine Service Locations (<https://academic.oup.com/jamia/article/24/5/891/3061466>) describes how a rural health system utilized EHR data to analyze optimal locations for specialty pediatric telemedicine sites. Additionally, Restoring Access to Maternity Care in Rural America (<https://www.commonwealthfund.org/publications/2021/sep/restoring-access-maternity-care-rural-america>) highlights how a New Mexico Rural Maternity and Obstetrics Management Strategies (<https://www.hrsa.gov/rural-health/grants/rural-community/rmoms>) (RMOMS) network uses both telehealth and HIT to expand access to obstetrics care in five rural counties.

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## What is digital health literacy, and how does it impact patients' ability to access health information and telehealth services?

According to Healthy People 2030 (<https://health.gov/healthypeople/priority-areas/health-literacy-healthy-people-2030>), health literacy relates to individuals' "ability to find, understand, and use information and services to inform health-related decisions and actions" and the degree to which organizations enable these actions. Similarly, digital health literacy (<https://psnet.ahrq.gov/primer/digital-health-literacy>) describes the ability to use digital or electronic tools to successfully find, navigate, use, and understand health information and patient resources.

Digital health literacy is necessary for individuals to take full advantage of telehealth services and information technology. A New Era of Health Literacy? Expanded Definitions, Digital Influences, and Rural Inequities (<https://www.ruralhealthinfo.org/rural-monitor/digital-health-literacy>), a 2022 *Rural Monitor* article, describes challenges to digital health literacy in rural areas. This article quotes Dr. Cynthia Baur, a member of the Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2030's Health Literacy Subgroup and director of the University of Maryland School of Public Health Horowitz Center for Health Literacy, that "just because people have smartphones, they're not necessarily smartphone application users...If they do download apps, they may not be able to use them with proficiency." For example, Hospital Capabilities to Enable Patient Electronic Access to Health Information, 2021 (<https://www.healthit.gov/sites/default/files/2022-09/Hospital%20Capabilities%20to%20Enable%20Patient%20Electronic%20Access%20to%20Health%20Information%202021%20Data%20Brief.pdf>), shows that small hospitals, Critical Access Hospitals, rural, and other independent hospitals have increased patient access to health information, including clinical notes, since 2017. However, a 2021 data brief (<https://www.healthit.gov/sites/default/files/page/2021-09/HINTS%202020%20Consumer%20Data%20Brief.pdf>), from the Office of the National Coordinator for Health Information Technology reports that while 59% of patients were offered access to an electronic patient portal in 2020, only 38% of patients accessed their patient portal. Additionally, Some Digital Divides Persist Between Rural, Urban and Suburban America

(<https://www.pewresearch.org/short-reads/2021/08/19/some-digital-divides-persist-between-rural-urban-and-suburban-america/>) shows that rural residents continued to have lower rates of smartphone, tablet, and computer ownership than urban and suburban residents in 2021.

[Rural Libraries Help Communities Access Health Information](https://www.ruralhealthinfo.org/rural-monitor/rural-libraries) (<https://www.ruralhealthinfo.org/rural-monitor/rural-libraries>), a 2020 *Rural Monitor* article, describes how rural libraries in South Carolina, Vermont, and Washington work to increase digital health literacy by offering monthly programs and teaching patrons and staff how to access reliable health information online. The [Digital Navigation Toolkit](https://telehealthresourcecenter.org/wp-content/uploads/2023/07/Digital-Navigation-Toolkit-Combined-Edits-AUG-2023.pdf) (<https://telehealthresourcecenter.org/wp-content/uploads/2023/07/Digital-Navigation-Toolkit-Combined-Edits-AUG-2023.pdf>) from the National Consortium of Telehealth Resource Centers outlines links to resources to support individuals who aid community members with connectivity, devices, and digital skills and facilitate access to care through telehealth. [Digital Navigation: A Model for Holistic Digital Support](https://ruralhealthlink.org/wp-content/uploads/2024/02/EB-TNP-Webinar_Digital-Navigation_Feb-2024.pdf) ([https://ruralhealthlink.org/wp-content/uploads/2024/02/EB-TNP-Webinar\\_Digital-Navigation\\_Feb-2024.pdf](https://ruralhealthlink.org/wp-content/uploads/2024/02/EB-TNP-Webinar_Digital-Navigation_Feb-2024.pdf)), a February 2024 webinar from the Office for the Advancement of Technology's Evidence-Based Telehealth Network Program, provides an overview of the digital navigator model and examples of digital navigators in healthcare settings. The Northwest Regional Telehealth Resource Center offers a [free, self-paced course](https://nrtrc.catalog.instructure.com/courses/navigating-the-telehealth-neighborhood-a-guide-to-telehealth-access-for-digital-navigators) (<https://nrtrc.catalog.instructure.com/courses/navigating-the-telehealth-neighborhood-a-guide-to-telehealth-access-for-digital-navigators>) for digital navigators and anyone helping a patient or loved one access telehealth services. The National Rural Health Resource Center also provides [information about telehealth campaigns](https://www.ruralcenter.org/programs/drchsd/customizable-communications-toolkit/telehealth-campaign) (<https://www.ruralcenter.org/programs/drchsd/customizable-communications-toolkit/telehealth-campaign>) to promote confidence in telehealth services.

For additional resources and information on strategies to improve health literacy in rural communities, see the [Rural Health Literacy Toolkit](https://www.ruralhealthinfo.org/toolkits/health-literacy) (<https://www.ruralhealthinfo.org/toolkits/health-literacy>).

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## Telehealth

### What do we know about telehealth use in rural areas?

Before the COVID-19 pandemic, rural telehealth use was trending upward. A 2016 *JAMA* article, [Utilization of Telemedicine among Rural Medicare Beneficiaries](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4943212/) (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4943212/>), found telemedicine visits for rural Medicare beneficiaries increased from 2004 to 2013 at an annual growth rate of 28%. The article reports nearly 80% of rural beneficiary telehealth visits were for mental health conditions. A 2019 American Hospital Association (AHA) publication, [Fact Sheet: Telehealth](https://www.aha.org/system/files/2019-02/fact-sheet-telehealth-2-4-19.pdf) (<https://www.aha.org/system/files/2019-02/fact-sheet-telehealth-2-4-19.pdf>), found a consistent positive trend in the number of hospitals using telehealth services.

According to the report, in 2010 35% of hospitals reported full or partial implementation that grew to 76% of hospitals reporting telehealth usage in 2017.

Telehealth use expanded dramatically when the Centers for Medicare & Medicaid Services removed geographic restrictions and changed reimbursement requirements during the COVID-19 pandemic to allow providers to expand the use of telehealth services as many states implemented physical distancing and other restrictions to curb the spread of the disease. A [February 2022 analysis](https://www.healthsystemtracker.org/brief/outpatient-telehealth-use-soared-early-in-the-covid-19-pandemic-but-has-since-receded/) (<https://www.healthsystemtracker.org/brief/outpatient-telehealth-use-soared-early-in-the-covid-19-pandemic-but-has-since-receded/>) from the Peterson-KFF Health System Tracker reports that the share of outpatient visits by telehealth rose from less than 1% to 13% of all outpatient visits between March and August 2020. A 2021 [Medicare Telemedicine Snapshot](https://www.cms.gov/files/document/medicare-telemedicine-snapshot.pdf) (<https://www.cms.gov/files/document/medicare-telemedicine-snapshot.pdf>) shows that between March 1, 2020, and February 28, 2021, 53% of Medicare beneficiaries used telemedicine. During this period, 44% of Medicare users in rural areas used a telemedicine service, while 55% of urban Medicare users used telemedicine. [Examining Rural Telehealth During the Public Health Emergency](https://www.cms.gov/files/document/examining-rural-telehealth-jan-2023.pdf) (<https://www.cms.gov/files/document/examining-rural-telehealth-jan-2023.pdf>) shows that while the use of telehealth has declined since its height in 2020, urban Medicare beneficiaries continue to use outpatient and behavioral health telehealth services at higher rates than beneficiaries in rural areas. [Rural Federally Qualified Health Centers Financial and Operational Performance Analysis 2018-2021](https://caplink.org/rural-trends-2023) (<https://caplink.org/rural-trends-2023>), a 2023 report from Capital Link with support from the Health Resources and Services Administration, shows that rural FQHCs conducted 4.9 million visits

via telehealth in 2021. The 2023 article [Telemedicine Visits in US Skilled Nursing Facilities](https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2808491) (<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2808491>) also found that skilled nursing facilities that used telehealth the most were twice as likely to be in non-metropolitan areas in 2021.

## How does the use of telehealth impact rural healthcare providers, facilities, and communities?

A 2015 National Advisory Committee on Rural Health and Human Services policy brief, [Telehealth in Rural America](https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/rural/2015-telehealth.pdf) (<https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/rural/2015-telehealth.pdf>), discusses that telehealth can create a virtual professional network, can reduce a rural provider's feelings of isolation and burnout, and subsequently improve provider retention at rural hospitals. The article [Telemedicine: Changing the Landscape of Rural Physician Practice](https://resources.nejmcareercenter.org/article/telemedicine-changing-the-landscape-of-rural-physician-practice/) (<https://resources.nejmcareercenter.org/article/telemedicine-changing-the-landscape-of-rural-physician-practice/>) highlights testimonials from healthcare providers practicing in rural areas throughout the U.S. Dr. Wilbur Hitt discusses his experiences of how telehealth reduces rural practice isolation:

"Telemedicine fosters a collaboration that reduces the feelings of isolation that physicians may experience when they go to practice in a small town. With telemedicine, it's like having one foot in the city but being able to live and practice out in a rural area. It's also reassuring to know that you're on the right track with the treatment plan and are staying current."

Healthcare systems with the infrastructure and staffing to support telehealth services impact how rural providers are able to provide patient care by giving them access to:

- Team-based care
- Other specialists and subspecialists for consults in real time
- Virtual networks with peers
- Outsourced diagnostic analyses
- In-home monitoring of patients for follow-up care
- Continuing education and training, reducing travel and out-of-practice time

To learn more about how telehealth impacts the recruitment of rural providers, see [How can telehealth and other technology be used to make rural practice more attractive to candidates?](https://www.ruralhealthinfo.org/topics/rural-health-recruitment-retention#telehealth) (<https://www.ruralhealthinfo.org/topics/rural-health-recruitment-retention#telehealth>) on the Recruitment and Retention for Rural Health Facilities topic guide.

The financial impact of implementing telehealth services in a community can vary, depending on the type of healthcare service or services to be offered using telehealth and the patient population. [Anticipating Economic Returns of Rural Telehealth](https://www.ntca.org/sites/default/files/documents/2017-12/SRC_whitepaper_anticipatingeconomicreturns.pdf) ([https://www.ntca.org/sites/default/files/documents/2017-12/SRC\\_whitepaper\\_anticipatingeconomicreturns.pdf](https://www.ntca.org/sites/default/files/documents/2017-12/SRC_whitepaper_anticipatingeconomicreturns.pdf)), a 2017 NTCA – The Rural Broadband Association report, describes telehealth potential benefits including the following quantifiable benefits:

- Decreased patient transportation costs
- Minimizing patient lost wages
- Reduced hospital staffing costs
- Increased local lab and pharmacy revenues

The report also lists nonquantifiable patient benefits:

- Increased access to specialists
- Providing timely care
- Ensuring patient comfort
- Reducing need for transportation
- Benefits to the provider
- Improved patient outcomes

Additionally, more states have started to consider legislation such as telehealth parity laws, which would require insurers to cover services provided via telehealth technology at the same rate as services delivered in person. CCHP offers [state-by-state information on current laws and reimbursement policies](https://www.cchpca.org/all-telehealth-policies/) (<https://www.cchpca.org/all-telehealth-policies/>), including service and payment [parity laws](https://www.cchpca.org/topic/parity/) (<https://www.cchpca.org/topic/parity/>).

Hospitals that use teleconsultation and telementoring services can retain revenue when providers at those hospitals are able to treat patients in a local hospital, instead of transferring to another healthcare facility for specialty care.

A 2017 *Journal of Telemedicine and Telecare* article, [Using Tele-Emergency to Avoid Patient Transfers in Rural Emergency Departments: An Assessment of Costs and Benefits](https://pubmed.ncbi.nlm.nih.gov/29278984/) (<https://pubmed.ncbi.nlm.nih.gov/29278984/>), discusses the financial and other benefits of a tele-emergency program in rural hospitals resulting in a cost savings of approximately \$3,800 per patient who avoided transfer. The 2022 *American Journal of Managed Care* article [Financial Impact of Telehealth: Rural Chief Financial Officer Perspectives](https://www.ajmc.com/view/financial-impact-of-telehealth-rural-chief-financial-officer-perspectives) (<https://www.ajmc.com/view/financial-impact-of-telehealth-rural-chief-financial-officer-perspectives>) highlights perceived impacts of telehealth services on rural hospital finances, highlighting concerns about the overall financial viability of telehealth services while acknowledging that they offer value in improving patient quality of care.

## How is telehealth used to reach patients in their homes?

**E-visits and virtual visits** are communications between a patient and provider that are not face-to-face. E-visits and virtual visits are initiated by the patient, often from the patient's home, through an online portal. E-visits and virtual visits can include [direct-to-consumer telehealth](https://telehealth.hhs.gov/providers/best-practice-guides/direct-to-consumer) (<https://telehealth.hhs.gov/providers/best-practice-guides/direct-to-consumer>), which occurs when a patient asks a question or initiates an appointment with a provider on their own device, and can occur synchronously or asynchronously.

**Remote patient monitoring** (RPM) is the collection of personal health and medical data from patients in their home. After data collection, the data are transmitted to a healthcare provider in a different location to be used in healthcare decision-making. For a project example, see the [Bridges to Care Transitions-Remote Home Monitoring and Chronic Disease Self-Management](https://www.ruralhealthinfo.org/project-examples/1016) (<https://www.ruralhealthinfo.org/project-examples/1016>), which is a collaboration between three healthcare organizations that works to identify and enroll at-risk patients in an RPM program and a chronic disease education and coaching program after an inpatient hospitalization or emergency room visit. The *Rural Monitor* article [Remote Patient Monitoring Helps Rural Patients Recover at Home](https://www.ruralhealthinfo.org/rural-monitor/remote-patient-monitoring) (<https://www.ruralhealthinfo.org/rural-monitor/remote-patient-monitoring>) describes how a health system used RPM to monitor COVID-19 patients from a central location. [Considerations for Selecting a Technology Vendor](https://telehealthresourcecenter.org/wp-content/uploads/2022/07/CTRC-Toolkit-Temp_Pack_Considerations-for>Selecting-a-Tech-Vend2.pdf) ([https://telehealthresourcecenter.org/wp-content/uploads/2022/07/CTRC-Toolkit-Temp\\_Pack\\_Considerations-for>Selecting-a-Tech-Vend2.pdf](https://telehealthresourcecenter.org/wp-content/uploads/2022/07/CTRC-Toolkit-Temp_Pack_Considerations-for>Selecting-a-Tech-Vend2.pdf)), a toolkit from the California Telehealth Resource Center, provides key questions for RPM technology vendors and suggestions for a phased approach to vendor selection.

**mHealth, also called mobile health**, can be used by providers and public health units to communicate with patients and citizens in their homes. mHealth is the use of mobile devices to provide health-related information, including general education, special notifications, or communication through a health application. mHealth can also be used for remote monitoring, where personal health and medical data are collected from a patient in the home. The Becker's Health IT & CIO Report article [The Rise of mHealth: 10](https://www.beckershealthit.com/the-rise-of-mhealth)

[Trends](https://www.beckershospitalreview.com/healthcare-information-technology/the-rise-of-mhealth-10-trends.html) (<https://www.beckershospitalreview.com/healthcare-information-technology/the-rise-of-mhealth-10-trends.html>) reports that mobile devices, applications, tablets, and other smart devices are becoming an integral part of mHealth. The National Telehealth Technology Assessment Resource Center (TTAC) offers an overview of [mHealth](https://telehealthtechnology.org/toolkit/mhealth/) (<https://telehealthtechnology.org/toolkit/mhealth/>) technology and other resources related to [product information](https://telehealthtechnology.org/toolkit/mhealth-product-information/) (<https://telehealthtechnology.org/toolkit/mhealth-product-information/>), and [product assessment](https://telehealthtechnology.org/toolkit/mhealth-product-assessment/) (<https://telehealthtechnology.org/toolkit/mhealth-product-assessment/>).

**Telecare** is a term for offering remote monitoring to people who are elderly or have disabilities. Telecare provides care and monitoring to allow these patients to live independently in their homes. Telecare technology can include fitness trackers and apps, wearable sensors, medication reminders, and fall detection devices.

**Telebehavioral health**, also known as telemental health, expands access to mental and behavioral health services, especially in underserved and rural mental healthcare deserts. A 2023 study describes how telehealth served as a bridge to behavioral healthcare for medically underserved groups during the COVID-19 pandemic. [Evidence Brief: Safety and Effectiveness of Telehealth-Delivered Mental Health Care](https://www.hsrdr.research.va.gov/publications/esp/telehealth-mh-brief.pdf) (<https://www.hsrdr.research.va.gov/publications/esp/telehealth-mh-brief.pdf>), a 2022 publication from the U.S. Department of Veterans Affairs, outlines research on the safety and effectiveness of telehealth-based mental healthcare for veterans, and the 2022 *Rural Monitor* article [Telehealth Brings Important Services to Rural Long-Term Care Facilities](https://www.ruralhealthinfo.org/rural-monitor/long-term-care-telehealth) (<https://www.ruralhealthinfo.org/rural-monitor/long-term-care-telehealth>) discusses the benefits of telehealth services for residents and staff of rural long-term care facilities. The Mid-Atlantic Telehealth Resource Center (MATRC) operates the [Telebehavioral Health Center of Excellence](https://tbhcoe.matrc.org/) (<https://tbhcoe.matrc.org/>), which provides resources to support providers looking to start or enhance a telebehavioral or telemental health program. [Telehealth for Behavioral Health Care](https://telehealth.hhs.gov/providers/best-practice-guides/telehealth-for-behavioral-health) (<https://telehealth.hhs.gov/providers/best-practice-guides/telehealth-for-behavioral-health>), a best practice guide from telehealth.hhs.gov, discusses telebehavioral health implementation, including developing a strategy and billing.

## What are the challenges related to providing telehealth services in rural communities?

While telehealth has the potential to offset many barriers to rural healthcare access, there are often challenges that must be overcome to achieve telehealth's potential. The 2020 *Journal of Rural Health* article [Evaluating Telehealth Adoption and Related Barriers Among Hospitals Located in Rural and Urban Areas](https://onlinelibrary.wiley.com/doi/10.1111/jrh.12534) (<https://onlinelibrary.wiley.com/doi/10.1111/jrh.12534>) examines barriers to telehealth adoption in rural hospitals, including lack of health information exchange capabilities and limited patient engagement. The Center for Health Care Strategies' policy sheet [Telehealth in Rural America: Disruptive Innovation for the Long Term?](https://www.chcs.org/resource/telehealth-in-rural-america-disruptive-innovation-for-the-long-term/) (<https://www.chcs.org/resource/telehealth-in-rural-america-disruptive-innovation-for-the-long-term/>) describes rural-specific concerns surrounding telehealth following COVID-19. In addition, [The Impact of COVID-19 on the Rural Health Care Landscape](https://bipartisanpolicy.org/download/?file=/wp-content/uploads/2022/05/BPC-Medicare-Rural-EmerHsp_R02.pdf) ([https://bipartisanpolicy.org/download/?file=/wp-content/uploads/2022/05/BPC-Medicare-Rural-EmerHsp\\_R02.pdf](https://bipartisanpolicy.org/download/?file=/wp-content/uploads/2022/05/BPC-Medicare-Rural-EmerHsp_R02.pdf)), an April 2022 Bipartisan Policy Center report, offers policy recommendations to further advance telehealth access in rural communities.

## Reimbursement

Reimbursement is commonly cited as a major challenge for telehealth programs, including concerns related to geographic restrictions, provider restrictions, and service restrictions. For example, [Financial Impact of Telehealth: Rural Chief Financial Officer Perspectives](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10074395/) (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10074395/>) notes that for Rural Health Clinics (RHCs) in particular, Medicare reimburses telehealth services at lower rates than comparable in-person visits. The article also notes that while Critical Access Hospitals' cost-based reimbursement by Medicare alleviates some financial risk, not all costs related to telehealth are considered allowable.

Individual state Medicaid programs vary in their guidelines regarding reimbursement for telehealth services. The Center for Connected Health Policy's (CCHP) biannual report, [State Telehealth Laws and Reimbursement Policies](https://www.cchpca.org/resources/state-telehealth-laws-and-reimbursement-policies-report-fall-2023-2/) (<https://www.cchpca.org/resources/state-telehealth-laws-and-reimbursement-policies-report-fall-2023-2/>), summarizes telehealth-related laws and reimbursement policies for all 50 states and the District

of Columbia. The report includes a focus on Medicaid coverage for telehealth. CCHP also maintains [telehealth state law and reimbursement policy guides](https://www.cchpca.org/) (<https://www.cchpca.org/>) that are browsable by state and by topic. The 2019 National Rural Health Association (NRHA) policy brief [Telehealth in Rural America](https://www.ruralhealth.us/getmedia/f84308bb-408b-4452-becb-61426ed82fb5/2019-NRHA-Policy-Document-Telehealth-In-Rural-America.pdf) (<https://www.ruralhealth.us/getmedia/f84308bb-408b-4452-becb-61426ed82fb5/2019-NRHA-Policy-Document-Telehealth-In-Rural-America.pdf>) elaborates on barriers to telehealth and provides policy recommendations to increase access to telehealth. Reimbursement by private payers for telehealth services can also vary. Some health insurance companies reimburse for telehealth services, while others do not.

In response to the COVID-19 pandemic, the U.S. Department of Health and Human Services implemented temporary policy changes to increase flexibility in offering telehealth services, including reimbursement. Several flexibilities became permanent during the pandemic, such as the ability to use audio-only communication for behavioral health services and allowing Rural Health Clinics (RHCs) and Federally Qualified Health Centers (FQHCs) to serve as a distant site for behavioral health services. The [Consolidated Appropriations Act, 2023](https://www.govinfo.gov/content/pkg/PLAW-117publ328/pdf/PLAW-117publ328.pdf) (<https://www.govinfo.gov/content/pkg/PLAW-117publ328/pdf/PLAW-117publ328.pdf>) extended many other pandemic-era Medicare telehealth flexibilities through 2024, including the ability of all eligible Medicare providers to provide telehealth services and RHCs and FQHCs to serve as distant site providers for non-behavioral health services, among other policies. [Telehealth Policy Changes after the COVID-19 Public Health Emergency](https://telehealth.hhs.gov/providers/telehealth-policy/policy-changes-after-the-covid-19-public-health-emergency) (<https://telehealth.hhs.gov/providers/telehealth-policy/policy-changes-after-the-covid-19-public-health-emergency>) highlights telehealth flexibilities that have been made permanent or extended through 2024. This [healthcare provider fact sheet](https://www.hhs.gov/about/news/2023/05/10/hhs-fact-sheet-telehealth-flexibilities-resources-covid-19-public-health-emergency.html) (<https://www.hhs.gov/about/news/2023/05/10/hhs-fact-sheet-telehealth-flexibilities-resources-covid-19-public-health-emergency.html>) and [reimbursement FAQ document](https://www.cms.gov/files/document/frequently-asked-questions-cms-waivers-flexibilities-and-end-covid-19-public-health-emergency.pdf) (<https://www.cms.gov/files/document/frequently-asked-questions-cms-waivers-flexibilities-and-end-covid-19-public-health-emergency.pdf>) provide more detail on U.S. Department of Health and Human Services (HHS) permanent and temporary regulatory changes.

## Licensure

Licensure has long presented barriers to telehealth provision in rural areas. Physicians who wish to practice in multiple states must be licensed by the professional licensing board in each state where they are delivering care to patients. The U.S. Department of Veterans Affairs (VA) is an exception; VA physicians have license portability that allows them to practice across state lines to wherever the veteran is receiving care. The [Licensure section of telehealth.HHS.gov](https://telehealth.hhs.gov/licensure) (<https://telehealth.hhs.gov/licensure>) provides information on licensure as it pertains to the provision of telehealth. Topics include licensing across state lines, licensure compacts, and licensure for behavioral health.

[Telehealth and Licensure Policies Improving Healthcare Access for Rural Communities](https://www.astho.org/communications/blog/telehealth-licensure-policies-improving-access-for-rural-communities/) (<https://www.astho.org/communications/blog/telehealth-licensure-policies-improving-access-for-rural-communities/>) explores legislative actions some states have taken to ease licensure barriers and the associated burden, such as:

- Offering specific licenses for limited telehealth licenses for out-of-state providers
- Allowing providers with an active license in another state to provide telehealth services
- Creating interstate licensing compacts

The [Interstate Medical Licensure Compact](https://www.imlcc.org/) (<https://www.imlcc.org/>) (IMLC) is an agreement between participating states and territories and osteopathic and medical boards within those jurisdictions. IMLC offers qualified physicians an expedited process to become licensed to practice in multiple states. Since its inception in 2014, 39 states, the District of Columbia, and Guam have adopted the compact. For more information on the process, qualifications, and the agreement, see IMLC's [frequently asked questions](https://www.imlcc.org/faqs/) (<https://www.imlcc.org/faqs/>).

There are many other licensure compacts involved in the delivery of healthcare services to rural populations using telehealth, including:

- [Advanced Practice Registered Nurse Compact](https://www.aprncompact.com/) (<https://www.aprncompact.com/>). (APRN Compact)
- [Audiology and Speech-Language Pathology Interstate Compact](https://www.asha.org/Advocacy/state/Audiology-and-Speech-Language-Pathology-Interstate-) (<https://www.asha.org/Advocacy/state/Audiology-and-Speech-Language-Pathology-Interstate->

### Compact/) (ASLP-IC)

- [EMS Compact](https://www.emscompact.gov/) (<https://www.emscompact.gov/>).
- [Nurse Licensure Compact](https://www.nurseccompact.com/) (<https://www.nurseccompact.com/>) (NLC)
- [Physical Therapy Licensure Compact](https://www.fsbpt.org/Free-Resources/Physical-Therapy-Licensure-Compact) (<https://www.fsbpt.org/Free-Resources/Physical-Therapy-Licensure-Compact>)
- [Psychology Interjurisdictional Compact](https://www.asppb.net/page/PSYPACT) (<https://www.asppb.net/page/PSYPACT>) (PSYPACT)

In addition, the [Counseling Compact](https://counselingcompact.org/) (<https://counselingcompact.org/>) and [Occupational Therapy Licensure Compact](https://otcompact.org/) (<https://otcompact.org/>) (OT Compact) expect to begin issuing privileges to practice, or "compact privileges," in late 2024 and 2025.

In 2021, the Federation of State Medical Boards, with the support of HRSA, launched [Provider Bridge](https://www.providerbridge.org/) (<https://www.providerbridge.org/>), a platform that facilitates license portability to allow providers to submit credentials and treat patients in high demand areas via telehealth.

## Broadband

Affordable broadband is required to support telehealth programs. Traditionally, healthcare facilities need broadband to provide telehealth services as originating and distant sites. Modern applications of telehealth, such as remote patient monitoring and synchronous video visits, also require patients to have broadband in their homes to achieve maximum functionality and reliability. See the [broadband section](#) of this guide for more information and resources about broadband in rural areas.

Additional challenges restricting the adoption of telehealth in rural areas including malpractice, HIPAA and privacy, security, prescribing, and credentialing are discussed in CCHP's 2019 [Telehealth Policy Barriers](https://cchp.nyc3.digitaloceanspaces.com/files/2019-02/TELEHEALTH%20POLICY%20BARRIERS%202019%20FINAL.pdf) (<https://cchp.nyc3.digitaloceanspaces.com/files/2019-02/TELEHEALTH%20POLICY%20BARRIERS%202019%20FINAL.pdf>) fact sheet.

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## What facility, technology, and staffing considerations are important when implementing telehealth services?

Experiences of Community Health Centers in Expanding Telemedicine ([https://www.rand.org/content/dam/rand/pubs/research\\_reports/RRA100/RRA100-1/RAND\\_RRA100-1.pdf](https://www.rand.org/content/dam/rand/pubs/research_reports/RRA100/RRA100-1/RAND_RRA100-1.pdf)), a 2020 report from the RAND Corporation, describes staffing, program, and process changes related to expanding telemedicine programs, as well as challenges and barriers to the growth of telemedicine.

When implementing or expanding a telehealth program, program planners should determine which telehealth modalities are compatible with provider and patient needs and resources, including access to technology and connectivity. [Module 4](#) (<https://www.ruralhealthinfo.org/toolkits/telehealth/4/implementation>) of the Rural Telehealth Toolkit identifies key concepts to consider when implementing or expanding a rural community telehealth program.

There are several resources and toolkits available to help providers develop telehealth programs. The [National Telehealth Technology Assessment Resource Center](#) (<https://telehealthtechnology.org/toolkits/>) (TTAC) offers a variety of toolkits that introduce technologies used in telehealth programs, including video platforms, digital cameras, and digital health equipment. The California Telehealth Resource Center (CTRC) developed a [Telehealth Coordinator Online Training](https://www.telehealthtrain.org/) (<https://www.telehealthtrain.org/>) that covers major concepts and resources needed to build a knowledge base and the skills necessary for a telehealth coordinator.

Telehealth.HHS.gov also offers [resources and best practice guides](#) (<https://telehealth.hhs.gov/providers>) on telehealth implementation for healthcare providers and staff, including telehealth workflow, health equity, and other topics. For example, [Getting Started with Telehealth](#) (<https://telehealth.hhs.gov/providers/getting-started>) includes information on evaluating vendors and developing a telemedicine service. [Telehealth for Providers: What You Need to Know](#) (<https://www.cms.gov/files/document/telehealth-toolkit-providers.pdf>), a toolkit from the Centers for

Medicare & Medicaid Services (CMS), also covers considerations for providers and organizations looking to offer telehealth services. Additionally, the American Academy of Family Physicians offers [A Toolkit for Building and Growing a Sustainable Telehealth Program in Your Practice](https://www.aafp.org/dam/AAFP/documents/practice_management/telehealth/2020-AAFP-Telehealth-Toolkit.pdf) ([https://www.aafp.org/dam/AAFP/documents/practice\\_management/telehealth/2020-AAFP-Telehealth-Toolkit.pdf](https://www.aafp.org/dam/AAFP/documents/practice_management/telehealth/2020-AAFP-Telehealth-Toolkit.pdf)). The National Consortium of Telehealth Resource Centers (<https://telehealthresourcecenter.org/>) also catalogs toolkits, assessments, and best practice guides for implementing and sustaining telehealth programs. The [Rural Telehealth Toolkit](https://www.ruralhealthinfo.org/toolkits/telehealth) (<https://www.ruralhealthinfo.org/toolkits/telehealth>) provides program examples and resources for developing telehealth programs to address access issues in rural communities.

If you would like assistance with new or existing telehealth services or if you have specific questions regarding your facility's needs, contact your regional [Telehealth Resource Center](https://telehealthresourcecenter.org/centers/) (<https://telehealthresourcecenter.org/centers/>).

## How do Telehealth Resource Centers (TRCs) help rural healthcare facilities develop telehealth services?

12 regional and 2 national Telehealth Resource Centers (TRCs) make up the [National Consortium of Telehealth Resource Centers](https://telehealthresourcecenter.org/) (<https://telehealthresourcecenter.org/>) (NCTRC) and are funded by HRSA's Office for the Advancement of Telehealth (OAT) to assist healthcare organizations, networks, and providers with implementing and answering ongoing questions related to cost-effective telehealth programs to serve rural and medically underserved areas and populations. The national TRCs are:

- [Center for Connected Health Policy: The National Telehealth Policy Resource Center](https://www.cchpca.org) (<https://www.cchpca.org>) (CCHP)
- [National Telehealth Technology Assessment Resource Center](https://telehealthtechnology.org/) (<https://telehealthtechnology.org/>) (TTAC)

The regional TRCs consist of:

- [California Telehealth Resource Center](https://caltrc.org/) (<https://caltrc.org/>) (CTRCC)
- [Great Plains Telehealth Resource and Assistance Center](https://www.gptrac.org/) (<https://www.gptrac.org/>) (gpTRAC)
- [Heartland Telehealth Resource Center](https://www.heartlandtrc.org/) (<https://www.heartlandtrc.org/>) (HTRC)
- [Mid-Atlantic Telehealth Resource Center](https://www.matrc.org/) (<https://www.matrc.org/>) (MATRC)
- [Northeast Telehealth Resource Center](https://netrc.org/) (<https://netrc.org/>) (NETRC)
- [Northwest Regional Telehealth Resource Center](https://nrtrc.org/) (<https://nrtrc.org/>) (NRTRC)
- [Pacific Basin Telehealth Resource Center](https://www.pbtrc.org/) (<https://www.pbtrc.org/>) (PBTRC)
- [South Central Telehealth Resource Center](https://learntelehealth.org/) (<https://learntelehealth.org/>) (SCTRC)
- [Southeastern Telehealth Resource Center](https://setrc.us/) (<https://setrc.us/>) (SETRC)
- [Southwest Telehealth Resource Center](https://southwesttrc.org/) (<https://southwesttrc.org/>) (SWTRC)
- [TexLa Telehealth Resource Center](https://texlatrc.org/) (<https://texlatrc.org/>) (TexLa)
- [Upper Midwest Regional Telehealth Resource Center](https://www.umtrc.org/) (<https://www.umtrc.org/>) (UMTRC)

To find the regional TRC that serves your state, see NCTRC's [Find Your TRC map](https://telehealthresourcecenter.org/centers/) (<https://telehealthresourcecenter.org/centers/>) and click on your state. NCTRC offers fact sheets; guides, templates, and checklists; research catalogs; news; events; and webinars that cover a wide range of topics including:

- Staffing and recruiting specialists
- Education and training
- Credentialing and licensing

- Medical malpractice and liability
- Reimbursement
- Billing
- Evaluation
- Marketing

NCTR hosts a [national TRC webinar series](https://telehealthresourcecenter.org/events/) (<https://telehealthresourcecenter.org/events/>) that offers monthly webinars on telehealth and related topics. [Past webinars](https://telehealthresourcecenter.org/resources/?s=&tax_type=category&tax_val=10&center_id=) ([https://telehealthresourcecenter.org/resources/?s=&tax\\_type=category&tax\\_val=10&center\\_id=](https://telehealthresourcecenter.org/resources/?s=&tax_type=category&tax_val=10&center_id=)) in the series are also available as resources. For more information on the NCTR and Telehealth Resource Centers, see [this consortium white paper](https://telehealthresourcecenter.org/wp-content/uploads/2021/02/NCTR-White-Paper-FINAL.pdf) (<https://telehealthresourcecenter.org/wp-content/uploads/2021/02/NCTR-White-Paper-FINAL.pdf>).

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## How did the COVID-19 pandemic affect telehealth policy?

Following the outbreak of COVID-19 in the United States in 2020, the Centers for Medicare & Medicaid Services removed geographic restrictions and changed reimbursement requirements to allow providers to expand the use of telehealth services in the places where patients live. This allowed providers to continue to offer care as many states implemented physical distancing and other restrictions to curb the spread of the disease. In addition, the [Coronavirus Aid, Relief, and Economic Security \(CARES\) Act](https://www.govinfo.gov/content/pkg/PLAW-116publ136/pdf/PLAW-116publ136.pdf) (<https://www.govinfo.gov/content/pkg/PLAW-116publ136/pdf/PLAW-116publ136.pdf>) allowed RHCs and FQHCs to serve as distant sites to provide telehealth services to patients at any location, including their homes, for the duration of the public health emergency. Many providers either expanded existing telehealth service offerings or rapidly developed telehealth programs. [Updated Medicare FFS Telehealth Trends by Beneficiary Characteristics, Visit Specialty and State, 2019-2021](https://aspe.hhs.gov/sites/default/files/documents/cb83f6f25c25c3a3529807f23cd2327d/medicare-telehealth-updated-trends-report.pdf) (<https://aspe.hhs.gov/sites/default/files/documents/cb83f6f25c25c3a3529807f23cd2327d/medicare-telehealth-updated-trends-report.pdf>) details that the overall increase in telehealth utilization by Medicare beneficiaries in 2020 and 2021 was greater in urban areas compared to rural areas, reflecting the removal of pre-pandemic geographic restrictions. However, beneficiaries in a primary care Health Professional Shortage Area (HPSA) had similar rates of telehealth use regardless of geography.

The [CY 2022 Medicare Physician Fee Schedule Final Rule](https://www.cms.gov/newsroom/fact-sheets/calendar-year-cy-2022-medicare-physician-fee-schedule-final-rule) (<https://www.cms.gov/newsroom/fact-sheets/calendar-year-cy-2022-medicare-physician-fee-schedule-final-rule>) updated federal regulations to permanently enable RHCs to be reimbursed by Medicare for mental health visits that use interactive, real-time audio-visual and audio-only technology. The [Consolidated Appropriations Act, 2023](https://www.govinfo.gov/content/pkg/PLAW-117publ328/pdf/PLAW-117publ328.pdf) (<https://www.govinfo.gov/content/pkg/PLAW-117publ328/pdf/PLAW-117publ328.pdf>) and the [CY 2023 Medicare Physician Fee Schedule Final Rule](https://www.cms.gov/newsroom/fact-sheets/calendar-year-cy-2024-medicare-physician-fee-schedule-final-rule) (<https://www.cms.gov/newsroom/fact-sheets/calendar-year-cy-2024-medicare-physician-fee-schedule-final-rule>) extended the ability of RHCs and FQHCs to serve as distant site providers through December 31, 2024. In addition, an [October 2023 notice](https://www.federalregister.gov/documents/2023/10/10/2023-22406/second-temporary-extension-of-covid-19-telemedicine-flexibilities-for-prescription-of-controlled) (<https://www.federalregister.gov/documents/2023/10/10/2023-22406/second-temporary-extension-of-covid-19-telemedicine-flexibilities-for-prescription-of-controlled>) from the Drug Enforcement Administration (DEA) extended pandemic-related telehealth flexibilities related to the prescribing of controlled substances through December 31, 2024. For more information on permanent and temporary telehealth policy changes, see [Telehealth Policy Changes after the Covid-19 Public Health Emergency](https://telehealth.hhs.gov/providers/telehealth-policy/policy-changes-after-the-covid-19-public-health-emergency) (<https://telehealth.hhs.gov/providers/telehealth-policy/policy-changes-after-the-covid-19-public-health-emergency>) from the U.S. Department of Health and Human Services.

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## Where can I find information on my state's telehealth policies?

The Center for Connected Health Policy maintains a [policy finder](https://www.cchpca.org/all-telehealth-policies/) (<https://www.cchpca.org/all-telehealth-policies/>) with current state telehealth laws and reimbursement policies. CCHP also publishes a biannual, comprehensive [report on current state telehealth laws](https://www.cchpca.org/resources/state-telehealth-laws-and-reimbursement-policies-report-fall-2023-2/) (<https://www.cchpca.org/resources/state-telehealth-laws-and-reimbursement-policies-report-fall-2023-2/>).

The [National Conference of State Legislatures](https://www.ncsl.org/health/the-telehealth-explainer-series/licensure-and-interstate-compacts) (<https://www.ncsl.org/health/the-telehealth-explainer-series/licensure-and-interstate-compacts>) also offers state-level information on telehealth coverage and reimbursement policies, with links to resources. For more information on telehealth policies in your state or region, contact your [regional Telehealth Resource Center](https://www.hrsa.gov/telehealth/telehealth-resource-centers) (<https://www.hrsa.gov/telehealth/telehealth-resource-centers>).

## What are some telehealth funding programs for rural providers?

There are several federal grant programs focused on funding rural telehealth projects, including:

- The U.S. Department of Agriculture (USDA) Rural Development sponsors several programs and opportunities for telehealth:
  - [USDA Distance Learning and Telemedicine Loan and Grant Program](https://www.ruralhealthinfo.org/funding/397) (<https://www.ruralhealthinfo.org/funding/397>) offers grants to support and improve telemedicine and distance learning services in rural areas.
  - [USDA Community Facilities Direct Loan and Grant Program](https://www.ruralhealthinfo.org/funding/91) (<https://www.ruralhealthinfo.org/funding/91>) awards direct loans and/or grants for essential community facilities in rural areas.
- The Universal Service Administrative Company (USAC) offers the [Rural Health Care Telecommunications Program](https://www.ruralhealthinfo.org/funding/4357) (<https://www.ruralhealthinfo.org/funding/4357>) and the [Healthcare Connect Fund Program](https://www.ruralhealthinfo.org/funding/3745) (<https://www.ruralhealthinfo.org/funding/3745>), which provide assistance and discounts to rural healthcare providers on eligible expenses for broadband and telecommunications access.
- The [Evidence Based Telehealth Network Program](https://www.ruralhealthinfo.org/funding/2055) (<https://www.ruralhealthinfo.org/funding/2055>). (EB TNP) is a HRSA program that supports existing telehealth programs to demonstrate evidence-based effectiveness at increasing access in rural and remote areas. [Grantee Directory 2023-2024](https://ruralhealthlink.org/wp-content/uploads/2024/03/2023-2024-OAT-Directory-FINAL.pdf) (<https://ruralhealthlink.org/wp-content/uploads/2024/03/2023-2024-OAT-Directory-FINAL.pdf>) provides an overview of EB TNP and other grant programs administered by HRSA's Office for the Advancement of Telehealth.

Additional federal, state, and private foundation funding opportunities can be found on our [list of funding opportunities related to telehealth](https://www.ruralhealthinfo.org/funding/topics/telehealth) (<https://www.ruralhealthinfo.org/funding/topics/telehealth>).

## Health Information Technology

### What is interoperability and how does it work for providers and patients?

The Healthcare Information and Management Systems Society (HIMSS) defines [interoperability](https://www.himss.org/resources/interoperability-healthcare) (<https://www.himss.org/resources/interoperability-healthcare>) as:

"the ability of different information systems, devices and applications (systems) to access, exchange, integrate and cooperatively use data in a coordinated manner, within and across organizational, regional and national boundaries, to provide timely and seamless portability of information."

Interoperability is a [policy objective](https://www.cms.gov/blog/interoperability-and-connected-health-care-system) (<https://www.cms.gov/blog/interoperability-and-connected-health-care-system>) that aims to standardize and make accessible health information from different sources and technologies in order to optimize healthcare delivery. [Connecting Health and Care for the Nation: A Shared Nationwide Interoperability Roadmap](https://www.healthit.gov/sites/default/files/hie-interoperability/nationwide-interoperability-roadmap-final-version-1.0.pdf) (<https://www.healthit.gov/sites/default/files/hie-interoperability/nationwide-interoperability-roadmap-final-version-1.0.pdf>) presents a breakdown of interoperability components and milestones. According to the Roadmap, the vision of the Office of the National Coordinator for Health Information Technology (ONC) for interoperability involves facilitating:

- Patient access to their electronic health information
- Secure, efficient provider access to health information from different sources
- Health information beyond data stored in electronic health records (EHRs)
- Information gathered by technology used by individuals
- Long-term health information that is not only tied to healthcare encounters
- Effective, precise processing of diagnostic tests
- Opportunities for public health agencies and researchers to develop treatments and innovations

ONC's HealthIT.gov offers an [overview of interoperability](https://www.healthit.gov/topic/interoperability) (<https://www.healthit.gov/topic/interoperability>), with information on policy, standards and technology, and tools and resources that have received ONC investment. ONC coordinated with CMS to provide a [series of HIT, health information exchange, and interoperability toolkits](https://www.healthit.gov/topic/interoperability/policy/advancing-interoperability-medicaid) (<https://www.healthit.gov/topic/interoperability/policy/advancing-interoperability-medicaid>) for Medicaid programs.

Our *Rural Monitor* article [EHR Interoperability: HIT Needs Across the Healthcare Continuum](https://www.ruralhealthinfo.org/rural-monitor/ehr-interoperability) (<https://www.ruralhealthinfo.org/rural-monitor/ehr-interoperability>), highlights the efforts of rural providers to integrate EHR and interoperability into their systems. [Prioritizing the Expansion of Electronic Medical Record Interoperability Software to Rural Health Care Systems](https://www.ruralhealth.us/getmedia/1c540480-4600-4270-a10f-1afe05d1597f/NRHA-Policy-Brief-EMR-final.pdf) (<https://www.ruralhealth.us/getmedia/1c540480-4600-4270-a10f-1afe05d1597f/NRHA-Policy-Brief-EMR-final.pdf>), a 2023 policy brief from the National Rural Health Association, describes the importance of improving rural EMR interoperability. For example, the ineffective and inefficient exchange of information may lead to poor care transitions and increased readmission rates.

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## Are HIT solutions such as EHRs widely used in rural facilities?

[Interoperability and Methods of Exchange among Hospitals in 2021](https://www.healthit.gov/sites/default/files/2023-01/DB64_Interop_and_Methods_of_Exchange_Among_Hosp.pdf) ([https://www.healthit.gov/sites/default/files/2023-01/DB64\\_Interop\\_and\\_Methods\\_of\\_Exchange\\_Among\\_Hosp.pdf](https://www.healthit.gov/sites/default/files/2023-01/DB64_Interop_and_Methods_of_Exchange_Among_Hosp.pdf))

reports that while almost all rural hospitals have implemented electronic health record (EHR) systems, only 48% of rural hospitals were able to participate in all four domains of EHR interoperability — sending, receiving, finding, and integrating summary of care records — compared to 62% of all hospitals nationwide. A 2022 ONC Data Brief, [Hospital Capabilities to Enable Patient Electronic Access to Health Information, 2021](https://www.healthit.gov/sites/default/files/2022-09/Hospital_Capabilities_to_Enable_Patient_Electronic_Access_to_Health_Information_2021_Data_Brief.pdf) ([https://www.healthit.gov/sites/default/files/2022-09/Hospital\\_Capabilities\\_to\\_Enable\\_Patient\\_Electronic\\_Access\\_to\\_Health\\_Information\\_2021\\_Data\\_Brief.pdf](https://www.healthit.gov/sites/default/files/2022-09/Hospital_Capabilities_to_Enable_Patient_Electronic_Access_to_Health_Information_2021_Data_Brief.pdf))

, found that approximately 70% of all hospitals had enabled patient access to digital health information in 2021. However, small hospitals, Critical Access Hospitals, rural, and other independent hospitals have enabled patient access to health information at lower rates than other hospitals. Similarly, [Progress and Ongoing Challenges to Electronic Public Health Reporting Among Non-Federal Acute Care Hospitals](https://www.healthit.gov/sites/default/files/2023-06/AHA-Public-Health-Data-Brief_508.pdf) ([https://www.healthit.gov/sites/default/files/2023-06/AHA-Public-Health-Data-Brief\\_508.pdf](https://www.healthit.gov/sites/default/files/2023-06/AHA-Public-Health-Data-Brief_508.pdf)) reports that in 2022, rural hospitals and Critical Access Hospitals engaged in fewer types of electronic public health reporting than other hospitals.

The *Rural Monitor* article, [Making the EHR Work: Rural Healthcare Organizations Use Data Extraction to Improve Patient Care](https://www.ruralhealthinfo.org/rural-monitor/ehr-data-extraction) (<https://www.ruralhealthinfo.org/rural-monitor/ehr-data-extraction>), discusses how rural organizations are using their EHR data to address population health issues. Kentucky's White House Clinics, for example, used their EHR to identify an increase in cancer screening rates after the

implementation of a new intervention program. In addition, [Lessons Learned from the Cohort Analysis of Rural Health Programs: Data Dashboards](https://www.ruralhealthinfo.org/assets/4472-19438/lessons-learned-dashboard-norc-brief.pdf) (<https://www.ruralhealthinfo.org/assets/4472-19438/lessons-learned-dashboard-norc-brief.pdf>) describes the use of data dashboards by Federal Office of Rural Health Policy grantees to capture key healthcare measures, track patient outcomes and trends, and improve care delivery.

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## What are considerations for rural facilities when implementing and upgrading HIT systems, including working with vendors?

Considerable planning is necessary to ensure a good fit and optimal use of an EHR system. Successful programs implement technology planning and staff training to achieve successful program outcomes.

There are many considerations for rural facilities when selecting and implementing EHRs. [Section 1 of the ONC Health IT Playbook](https://www.healthit.gov/playbook/electronic-health-records/) (<https://www.healthit.gov/playbook/electronic-health-records/>) includes information and resources for the six steps of EHR adoption, implementation, and improvement:

- Planning
  - Selecting a vendor
  - Contracting with a vendor
  - Implementing and adopting an EHR
  - Using your EHR
  - Optimizing or replacing your EHR
- 

## Why is cybersecurity an important issue for rural HIT?

Given the expectation for easily accessible health information for patients and providers alike, cybersecurity is vital to health systems expanding their HIT and telehealth capacity. Regardless of rural or urban location, healthcare organizations are subject to cybersecurity issues including malware and ransomware, denial of service (DOS) attacks, phishing scams, and other exploited vulnerabilities. [Hospital Cyber Resiliency Initiative Landscape Analysis](https://405d.hhs.gov/Documents/405d-hospital-resiliency-analysis.pdf) (<https://405d.hhs.gov/Documents/405d-hospital-resiliency-analysis.pdf>), a 2023 report from the U.S. Department of Health and Human Services HHS 405(d) Program and the Health Sector Coordinating Council Cybersecurity Working Group, outlines recent cybersecurity threats facing hospitals and assesses hospitals' current state of cybersecurity preparedness. However, as [testimony](https://www.hsgac.senate.gov/wp-content/uploads/Testimony-Pierce-2023-03-16.pdf) (<https://www.hsgac.senate.gov/wp-content/uploads/Testimony-Pierce-2023-03-16.pdf>) at a 2023 U.S. Senate Committee on Homeland Security and Governmental Affairs hearing details, cybersecurity is often an added cost burden for rural facilities.

The Health Insurance Portability and Accountability Act (HIPAA) of 1996 required the U.S. Department of Health and Human Services (HHS) to establish minimum standards for protecting the privacy and security of health information. One of the requirements of the [HIPAA Security Rule](https://www.hhs.gov/hipaa/for-professionals/security/laws-regulations/index.html) (<https://www.hhs.gov/hipaa/for-professionals/security/laws-regulations/index.html>) is to perform an annual risk assessment. This risk assessment should look at all the administrative, physical, and technological risks your organization faces. It recommends a third party be involved in the risk assessment to act as another set of eyes to identify any risks.

Many agencies and organizations provide information and resources for providers, hospitals, and others to provide guidance on conducting security and privacy assessments:

- ONC provides a [Security Risk Assessment Tool](https://www.healthit.gov/topic/privacy-security-and-hipaa/security-risk-assessment-tool) (<https://www.healthit.gov/topic/privacy-security-and-hipaa/security-risk-assessment-tool>), [SAFER Guides](https://www.healthit.gov/topic/safety/safer-guides) (<https://www.healthit.gov/topic/safety/safer-guides>), and other resources on [Privacy, Security, and HIPAA](https://www.healthit.gov/topic/privacy-security-and-hipaa) (<https://www.healthit.gov/topic/privacy-security-and-hipaa>)

- The National Rural Health Resource Center offers a [Cybersecurity Toolkit for Rural Hospitals and Clinics](https://www.ruralcenter.org/resources/cybersecurity-toolkit-rural-hospitals-and-clinics) (<https://www.ruralcenter.org/resources/cybersecurity-toolkit-rural-hospitals-and-clinics>)
- AHRQ provides a [Health Information Security and Privacy Collaboration Toolkit](https://digital.ahrq.gov/health-it-tools-and-resources/health-information-security-and-privacy-collaboration-toolkit) (<https://digital.ahrq.gov/health-it-tools-and-resources/health-information-security-and-privacy-collaboration-toolkit>)
- [Health Industry Cybersecurity Practices: Managing Threat and Protecting Patients](https://405d.hhs.gov/Documents/HICP-Main-508.pdf) (<https://405d.hhs.gov/Documents/HICP-Main-508.pdf>) from the HHS 405(d) Task Group includes practical cybersecurity guidelines for small, medium, and large healthcare organizations to cost-effectively reduce cybersecurity risks. [Technical Volume 1](https://405d.hhs.gov/Documents/tech-vol1-508.pdf) (<https://405d.hhs.gov/Documents/tech-vol1-508.pdf>) of this report is dedicated to cybersecurity practices for small healthcare organizations.
- The 2017 [Report on Improving Cybersecurity in the Health Care Industry](https://www.phe.gov/Preparedness/planning/CyberTF/Documents/report2017.pdf) (<https://www.phe.gov/Preparedness/planning/CyberTF/Documents/report2017.pdf>) from the Health Care Industry Cybersecurity Task Force provides several recommendations specific to small and rural hospitals to address cybersecurity challenges
- The U.S. Department of Health and Human Services [Cyber Security Guidance Material](https://www.hhs.gov/hipaa/for-professionals/security/guidance/cybersecurity/index.html) (<https://www.hhs.gov/hipaa/for-professionals/security/guidance/cybersecurity/index.html>) provides resources for HIPAA-covered entities on how to respond to cyber-related security incidents
- HIMSS provides multiple [toolkits and resources](https://www.himss.org/resources-cybersecurity-and-privacy) (<https://www.himss.org/resources-cybersecurity-and-privacy>) related to cybersecurity and privacy
- The American Hospital Association (AHA) offers a [What's Your Cyber Risk Profile? 12 Considerations for CEOs](https://www.aha.org/system/files/2018-09/Whats_Your_Cyber_Risk_Profile_2.pdf) ([https://www.aha.org/system/files/2018-09/Whats\\_Your\\_Cyber\\_Risk\\_Profile\\_2.pdf](https://www.aha.org/system/files/2018-09/Whats_Your_Cyber_Risk_Profile_2.pdf)) fact sheet and other cybersecurity and risk advisory [tools and resources](https://www.aha.org/cybersecurity) (<https://www.aha.org/cybersecurity>).

A 2023 *Rural Monitor* article, [Recovering from a Cybersecurity Attack and Protecting the Future in Small, Rural Health Organizations](https://www.ruralhealthinfo.org/rural-monitor/cybersecurity-attacks) (<https://www.ruralhealthinfo.org/rural-monitor/cybersecurity-attacks>) describes the impact of cyber-attacks at two Critical Access Hospitals and actions healthcare organizations can take to prepare for, and prevent, cyber-attacks.

## **What facility, technology, and staffing concerns accompany HIT, and what skill sets are necessary?**

Successful HIT programs implement technology planning, staffing, and training to achieve effective program outcomes. Some technology and staffing considerations include:

- Services to be supported and enhanced through telehealth
- Payment models and reimbursement
- Equipment needed, which can vary and is dependent on type of services to be provided
- Appropriate accommodations for technology where services are to be provided
- Data management services for handling, storing, printing, and transmitting medical information
- Training of providers and staff
- Provider and staff buy-in
- Support staff to implement telehealth programs
- Privacy and security concerns

[Landscape of the Health Informatics Workforce: Rapid Response Brief](https://familymedicine.uw.edu/chws/wp-content/uploads/sites/5/2023/04/RRR-on-Health-Informatics-final-v2.pdf) (<https://familymedicine.uw.edu/chws/wp-content/uploads/sites/5/2023/04/RRR-on-Health-Informatics-final-v2.pdf>) discusses barriers to implementing HIT systems and expanding the HIT workforce. For

example, the evolving scope and roles within the field have blurred the lines between HIT and clinical workforce duties. The pace of technological advancements creates difficulty in measuring and cultivating a robust HIT workforce.

#### Rural Health Information Technology Workforce Curriculum Resources

(<https://www.ruralhealthinfo.org/assets/5415-24848/rural-hit-curriculum-resources.pdf>), a September 2016 publication, provides planning and educational programs to train rural HIT workers, including an inventory of curriculum resources that includes detailed course descriptions and training materials. ONC's Health IT Curriculum Resources for Educators (<https://www.healthit.gov/topic/health-it-resources/health-it-curriculum-resources-educators>), another 2016 publication, provides health IT instructional materials covering 25 topics, including networking and health information exchange; quality improvement; and planning, management, and leadership for health IT.

Several programs have been established to increase the rural HIT workforce. The Rural Health Information Technology Workforce Program (<https://www.ruralhealthinfo.org/assets/742-2223/rural-health-it-workforce-program-sourcebook-0916.pdf>), a Federal Office of Rural Health Policy (FORHP) program, funded 15 grantees between 2013-2016 to develop formal rural health networks that focus on activities related to recruitment, education, training, and retention of health information technology specialists. More recently, FORHP's Delta Region Rural Health Workforce Training Program (<https://www.ruralhealthinfo.org/funding/5274>) funded strategic networks to support healthcare facilities in the Mississippi Delta region with the recruitment, training, certification, and placement of professionals in critical administrative support occupations, including health information management. The Rural Public Health Workforce Training Network Program (<https://www.ruralhealthinfo.org/forhp-funded-programs/rphwtn>), another FORHP program, awarded funding to 32 rural health networks in 2022 to help address workforce needs through job development, training, and placement activities across four workforce areas, including health information technology and/or telehealth technical support. In addition, ONC awarded funding to Historically Black Colleges and Universities, Tribal Colleges and Universities, other minority serving institutions through the Public Health Informatics and Technology Workforce Development Program (<https://www.healthit.gov/topic/interoperability/investments/public-health-informatics-technology-phit-workforce-development>) in order to increase and diversify the number of public health professionals trained in informatics and technology, with an emphasis on improving public health reporting.

As with any leadership role, succession planning for HIT leaders is important. Healthcare leaders should consider how HIT activities would continue if HIT staff leave due to retirement, prolonged illness, or other reasons. Leaders might also consider implementing training and career ladder programs to prepare the next wave of HIT leaders or outsource some of their HIT management if they lose their internal capacity.

See the Funding and Opportunities (<https://www.ruralhealthinfo.org/topics/telehealth-health-it/funding>), section of this guide for additional information for rural HIT workforce development funding and opportunities.

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## **What are some HIT funding programs for rural providers?**

Funding specifically aimed to assist with HIT is limited, but many grant and loan programs focus on issues and initiatives that interplay with HIT, such as healthcare quality, access to healthcare, healthcare workforce, improving efficiency, broadband access, capacity building, and network development. Some funding opportunities may be able to pay for HIT as part of a bigger initiative.

The U.S. Department of Agriculture (USDA) offers loan and grant programs that can fund HIT initiatives, including:

- Community Facilities Direct Loan and Grant Program (<https://www.ruralhealthinfo.org/funding/91>)
- Distance Learning and Telemedicine Program Grants (<https://www.ruralhealthinfo.org/funding/397>)
- Rural Economic Development Loan and Grant Program (<https://www.ruralhealthinfo.org/funding/1822>)

Several other federal organizations and agencies also offer grant opportunities that support HIT:

- Agency for Health Research and Quality (<https://www.ahrq.gov/funding/index.html>) (AHRQ)

- [Health Resources and Services Administration \(<https://www.hrsa.gov/grants/find-funding?status>All&bureau>All>\)](https://www.hrsa.gov/grants/find-funding?status>All&bureau>All) (HRSA), including the [Federal Office of Rural Health Policy \(<https://www.hrsa.gov/grants/find-funding?search=&status=All&bureau=90>\)](https://www.hrsa.gov/grants/find-funding?search=&status=All&bureau=90) and [Bureau of Primary Health Care \(<https://www.hrsa.gov/grants/find-funding?search=&status=All&bureau=86>\)](https://www.hrsa.gov/grants/find-funding?search=&status=All&bureau=86).

Other funding opportunities supporting rural providers and HIT exist. For example, the Universal Service Administration Company (USAC) [Healthcare Connect Fund \(<https://www.ruralhealthinfo.org/funding/3745>\)](https://www.ruralhealthinfo.org/funding/3745), provides assistance to healthcare providers for eligible expenses related to broadband connectivity at a flat discounted rate of 65%. Additional federal, state, and private foundation funding opportunities can be found on our [list of funding opportunities related to health information technology \(<https://www.ruralhealthinfo.org/funding/topics/health-information-technology>\)](https://www.ruralhealthinfo.org/funding/topics/health-information-technology).

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## Broadband

### **Why is broadband important for telehealth and HIT? How can we tell if broadband is available in our community?**

A March 2021 Congressional Research Service report, [The Digital Divide: What Is It, Where Is It, and Federal Assistance Programs \(<https://crsreports.congress.gov/product/pdf/R/R46613>\)](https://crsreports.congress.gov/product/pdf/R/R46613), defines broadband as high-speed internet access that is “faster than traditional dial-up access, always on, and relies on high-speed transmission technologies” such as digital subscriber line (DSL), cable, fiber, satellite, mobile and fixed wireless, and other advanced telecommunication connections. In March 2024, the Federal Communications Commission (FCC) [updated its benchmark \(<https://docs.fcc.gov/public/attachments/FCC-24-27A1.pdf>\)](https://docs.fcc.gov/public/attachments/FCC-24-27A1.pdf) for a fixed service provider providing advanced telecommunications capability to a download speed of 100 Mbps and an upload speed of 20 Mbps. The previous benchmark, 25/3 Mbps, was set in 2015. The FCC also set a long-term goal of 1,000 Mbps download speed and 500 Mbps upload speed.

Access to high-speed internet service is necessary for patients to make full use of telehealth services and HIT technology. However, there are noted disparities in access to broadband internet for low-income and rural populations, and many rural communities do not currently have access to internet connection speeds that support the effective and efficient transmission of data to provide telehealth services. The Federal Communication Commission's (FCC) March 2024 [Section 706 Report \(<https://docs.fcc.gov/public/attachments/FCC-24-27A1.pdf>\)](https://docs.fcc.gov/public/attachments/FCC-24-27A1.pdf) notes that in 2022, approximately 28% of rural residents and 24% of Americans in tribal areas did not have access to fixed broadband services that met the FCC's 100/20 Mbps minimum speed benchmark.

The broadband gap has the potential to lead to a new set of health inequities due to disparate access to telehealth. The 2021 report [Broadband Today: Rural America's Critical Connection \(<https://www.ntca.org/sites/default/files/documents/2021-02/Rural%20America%27s%20Critical%20Connection%20--%20FRS%20White%20Paper.pdf>\)](https://www.ntca.org/sites/default/files/documents/2021-02/Rural%20America%27s%20Critical%20Connection%20--%20FRS%20White%20Paper.pdf), discusses the importance of broadband access to rural business, telehealth, and remote work opportunities. [Broadband in Rural America: Faster Speeds for Home and Healthcare \(<https://www.ruralhealthinfo.org/rural-monitor/broadband>\)](https://www.ruralhealthinfo.org/rural-monitor/broadband), highlights how three programs worked to improve and leverage their communities' broadband infrastructure and telehealth capabilities. In addition, a 2022 [data brief \(\[https://www.healthit.gov/sites/default/files/2022-09/Hospital\\\_Capabilities\\\_to\\\_Enable\\\_Patient\\\_Electronic\\\_Access\\\_to\\\_Health\\\_Information\\\_2021\\\_Data\\\_Brief.pdf\]\(https://www.healthit.gov/sites/default/files/2022-09/Hospital\_Capabilities\_to\_Enable\_Patient\_Electronic\_Access\_to\_Health\_Information\_2021\_Data\_Brief.pdf\)\)](https://www.healthit.gov/sites/default/files/2022-09/Hospital_Capabilities_to_Enable_Patient_Electronic_Access_to_Health_Information_2021_Data_Brief.pdf) from the Office of the National Coordinator for Health Information Technology shows that while small, rural, independent, and Critical Access Hospitals increased patient access to health information electronically between 2018 and 2020, these hospitals enabled patients to access their health information at lower rates than other hospitals.

To determine the availability of fixed and mobile broadband deployment and broadband speed in your community, as well as other locations across the country, you can search the [FCC National Broadband Map \(<https://broadbandmap.fcc.gov/home>\)](https://broadbandmap.fcc.gov/home) by street address, congressional district, county, state, tribal area, and other geographic delineations. The FCC also maintains a [collection of other maps \(<https://www.fcc.gov/reports-research/maps/>\)](https://www.fcc.gov/reports-research/maps/) on national broadband coverage and deployment.

Specifically, [Residential Fixed Internet Access Service Connections per 1000 Households by Census Tract – December 2021](https://www.fcc.gov/reports-research/maps/tract-level-residential-fixed-connections-dec-2021/) (<https://www.fcc.gov/reports-research/maps/tract-level-residential-fixed-connections-dec-2021/>) shows the number of residential internet service connections per 1,000 households.

#### Broadband: FCC Is Taking Steps to Accurately Map Locations that Lack Access

(<https://www.gao.gov/products/gao-21-104447>) describes the challenges to provide up-to-date information on broadband availability given the various private companies operating in the telecommunications sector, the fragmentation of data sources, and the FCC's reliance on data self-reported by broadband providers. However, the broadband map can provide a general sense of accessibility at the community level. More information on FCC broadband data is available in the [FCC Broadband Data Collection](https://www.fcc.gov/BroadbandData) (<https://www.fcc.gov/BroadbandData>).

The 2021 *Rural Monitor* article [Broadband in Rural America: Faster Speeds for Home and Healthcare](https://www.ruralhealthinfo.org/rural-monitor/broadband) (<https://www.ruralhealthinfo.org/rural-monitor/broadband>) further describes broadband challenges and impacts on healthcare. For more information on broadband access and availability, see the Institute for Local Self-Reliance's collection of [digital equity fact sheets](https://ilsr.org/articles/exploring-digital-equity-fact-sheets/) (<https://ilsr.org/articles/exploring-digital-equity-fact-sheets/>).

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## We have limited broadband in our area. What are our options?

[Federal Funding for Broadband Deployment: Agencies and Considerations for Congress](https://crsreports.congress.gov/product/pdf/R/R47883) (<https://crsreports.congress.gov/product/pdf/R/R47883>), a December 2023 Congressional Research Service report, describes a number of federal programs healthcare facilities or their local telecommunication provider may be able to use to expand broadband access in rural areas. These programs include:

- **FCC's Rural Health Care Program** (<https://www.fcc.gov/general/rural-health-care-program>). provides funding to healthcare providers for telecommunications and broadband services for the provision of healthcare services. Two separate funding opportunities comprise the Rural Health Care Program:
  - [Healthcare Connect Fund \(HCF\) Program](https://www.ruralhealthinfo.org/funding/3745) (<https://www.ruralhealthinfo.org/funding/3745>) provides a 65% discount on eligible expenses related to broadband connectivity to individual and consortium rural healthcare providers.
  - [Telecommunications Program](https://www.ruralhealthinfo.org/funding/4357) (<https://www.ruralhealthinfo.org/funding/4357>) offers healthcare providers a discount on telecommunication expenses based on the urban and rural price differences in your area.
- **The U.S. Department of Agriculture** – provides information and resources on [investments in rural broadband and e-connectivity](https://www.usda.gov/broadband) (<https://www.usda.gov/broadband>), and offers many funding opportunities to expand telecommunication and broadband services, including:
  - [Rural eConnectivity Broadband Loan and Grant Program \(ReConnect\)](https://www.ruralhealthinfo.org/funding/4578) (<https://www.ruralhealthinfo.org/funding/4578>) – loans, grants, and loan/grant combinations to support broadband expansion in areas without sufficient access to broadband.
  - [Rural Broadband Loans, Loan/Grant Combinations, and Loan Guarantees Program](https://www.ruralhealthinfo.org/funding/438) (<https://www.ruralhealthinfo.org/funding/438>) – loans and loan guarantees for the costs of construction, improvement, or acquisition of facilities and equipment needed to provide broadband services.
  - [Community Connect Broadband Grant Program](https://www.ruralhealthinfo.org/funding/606) (<https://www.ruralhealthinfo.org/funding/606>) – funding to support the development of broadband services in rural communities.
  - [Telecommunications Infrastructure Loans and Loan Guarantees](https://www.ruralhealthinfo.org/funding/4358) (<https://www.ruralhealthinfo.org/funding/4358>) – financing for the construction, maintenance, improvement, and expansion of telephone and broadband services in rural areas.
  - [Distance Learning and Telemedicine Program Grants](https://www.ruralhealthinfo.org/funding/397) (<https://www.ruralhealthinfo.org/funding/397>) – funding to promote and improve telemedicine and distance learning services in rural areas using

telecommunications, computer networks, and related advanced technologies. Grant funds can be used to purchase equipment and capital assets, including broadband transmission facilities.

- **The National Telecommunications and Information Administration's Tribal Broadband Connectivity Program (<https://www.ruralhealthinfo.org/funding/5275>)** – provides funding for Native American, Alaska Native and Native Hawaiian lands for deployment of internet infrastructure, affordability programs, telehealth, and distance learning initiatives.

The Universal Service Administrative Company (USAC) Lifeline (<https://www.lifelinesupport.org/>), program is a federal program that provides eligible consumers with monthly discounts to make telephone and internet access more affordable.

The Mid-Atlantic Telehealth Resource Center offers resources (<https://www.matrc.org/explore-telehealth/broadband/>) on utilizing community facilities as "telehealth access points" to assist individuals who cannot afford or do not have access to broadband internet services.

Other funding programs and grants can be found on our list of funding opportunities related to broadband (<https://www.ruralhealthinfo.org/funding/topics/broadband>), which includes federal, state, and private foundation funding opportunities.

## More in This Topic Guide

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- Resources (<https://www.ruralhealthinfo.org/topics/telehealth-health-it/resources>)
- Organizations (<https://www.ruralhealthinfo.org/topics/telehealth-health-it/organizations>)
- Funding & Opportunities (<https://www.ruralhealthinfo.org/topics/telehealth-health-it/funding>)
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- About This Guide (<https://www.ruralhealthinfo.org/topics/telehealth-health-it/about-this-guide>)

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