



Health Care Transformation - Telemedicine: Implications for Missouri

Understanding Telemedicine

Telemedicine is the use of electronic communications and technology to remotely deliver health care services.¹ The term telehealth is sometimes used interchangeably with telemedicine, though it often has a broader definition relating to more than the delivery of clinical services. Telemedicine is used, in certain cases, as a substitute for in-person consultations to improve access to geographic regions or particular providers.

Services delivered through telemedicine can be done through a number of models:

- **Interactive videoconferencing:** The use of shared technology with both audio and visual capabilities to allow for real-time consultations.
- **Asynchronous store-and-forward technology:** The transfer of patient information from one provider to another.
- **Remote patient monitoring:** The use of digital technology to transfer medical information directly from patients to providers in another location.

All three modes differ in both their adoption rates and their effective uses. For example, interactive videoconferencing allows providers to have real-time, face-to-face contact with their patients. As a result, interactive videoconferencing can be used for a wider range of health care services, such as specialist consultations, post-operative appointments, and psychiatric diagnoses. On the other hand, asynchronous telemedicine is predominantly used for the transmission of imaging and lab results to a remote provider for review and diagnosis. Similarly, remote patient monitoring gathers patient information, such as blood pressure and other vital signs, from in-home tracking devices and forwards it to remote providers for their analysis.

Telemedicine Evolution Across the U.S.

Policies dictating coverage and reimbursement for telemedicine use a few key terms. These terms include the following:

- **Treating provider:** A provider who is present at the originating site with the patient and who asks the consulting provider to participate in the telemedicine visit. This person is sometimes called the telepresenter.
- **Consulting provider:** A provider located at the remote or distant site to provide a telemedicine consultation. This person is sometimes called the remote provider.
- **Originating site:** The location where the patient goes to receive telemedicine services.

¹ This is a general definition of telemedicine, though definitions often vary by state.

- **Distant site:** The remote site where the consulting provider is located at the time of the consultation with the patient.
- **Facility fee:** A payment given to the site where the patient is located (originating site).

Reimbursement

Payment for services delivered through telemedicine differs based on the type of delivery model, provider, payer, and state policies. Public payers compensate providers for telemedicine, though there are often many restrictions placed on the type of covered services. Similarly, private payers may cover telemedicine services at parity to comparable in-person services but continue to limit the number of eligible services and providers. Although payment and coverage of telemedicine has advanced significantly, reimbursement still creates a barrier to effective adoption and use.

Public Payers

Medicare only reimburses for a select number of health care services provided through interactive videoconferencing and does not currently cover store-and-forward telemedicine. Qualifying originating sites for telemedicine include physician offices, hospitals, Critical Access Hospitals, rural health clinics, Federally Qualified Health Centers, certain Renal Dialyses Centers, skilled nursing facilities, and Community Mental Health Centers. Telemedicine is only allowed for those eligible beneficiaries who come to an originating site that is located either in a rural Health Professional Shortage Area (HPSA) or in a county that is located outside of a Metropolitan Statistical Area (MSA). Both of these criteria are determined through the Health Resources and Services Administration (HRSA). These regulations essentially limit the use of telemedicine to only those beneficiaries who are located in a remote or rural area known for having provider shortages. If the visit is considered an eligible telemedicine service, Medicare will pay the consulting provider the same as an in-person visit. This practice is known as payment parity. In addition, Medicare will also pay a nominal facility fee to the originating site.ⁱ

Coverage under **Medicaid** varies by state. As of July 2015, all states except Iowa, Massachusetts, and Rhode Island had some form of Medicaid reimbursement for telemedicine. Of the 47 states providing some reimbursement, all had policies covering live videoconferencing. On the other hand, only nine states reimburse for store-and-forward technology; however, additional states, including Missouri, have since expanded reimbursement for asynchronous telemedicine in specific situations. More state Medicaid programs pay for remote patient monitoring than store-and-forward, with 16 states offering some form of coverage. Conversely, most state Medicaid programs exclude payment for services delivered via email, phone, or fax. Unlike Medicare, most states do not require that beneficiaries be located in rural or remote locations to receive care through telemedicine.

State Medicaid programs have differing policies on what providers or services are covered. Most allow physicians to provide care through telemedicine, so long as it's within their scope of practice; however, some limit physician reimbursement to include only specific services, patient populations, or conditions. Many states limit the types of health care providers that can receive payment from Medicaid for telemedicine. Policy language can explicitly outline which providers are to be covered in the program, with states listing dentists, substance and addiction specialists, and optometrists, among others. Mental health services typically fit within the telemedicine model because assessments, diagnostic interviews, and counseling do not necessarily require a face-to-face encounter or contact. As a result, 48 states cover telemental health provided through interactive videoconferencing. The most commonly covered providers of mental health services are psychiatrists and psychologists.ⁱⁱ

Private Payers

State laws governing telemedicine coverage for private insurance range greatly by state, yet there seems to be growing interest in promoting improved access. As of January 1, 2016, 32 states and the District of Columbia have laws governing coverage for telemedicine. Of that number, at least 28 states have enacted parity laws requiring private insurers to pay the same for telemedicine services as they would for in-person services. Nevertheless, the types of services eligible for full coverage parity vary, with restrictions enforced based on the provider, setting, or telemedicine model.

Access

Expansion of telemedicine coverage is becoming increasingly important as gaps in health care access widen. Despite the stringent eligibility requirement, Medicare covers telemedicine services to stimulate access in remote and rural locations. As a result of coverage expansions created in the Affordable Care Act, people now have better access to health insurance to cover the cost of care. Still, many people continue to experience difficulties gaining access to necessary providers and treatment. One of the largest strains on the current health care system is a shortage of providers, regardless of type or specialty. For example, in Missouri alone there are approximately 216 primary care Health Professional Shortage Areas (HPSAs) serving 1.6 million people. The number of primary care providers available to serve Missourians is only enough to meet 30 percent of the state's need. To overcome this provider shortfall, the state would need an additional 357 primary care providers. Similar trends are found when measuring shortages in dental providers and mental health providers. There are a total of 185 dental health HPSAs and 106 mental health HPSAs, meeting only 23 and 35 percent of the need respectively.ⁱⁱⁱ Telemedicine allows patients in one of those HPSAs to have access to necessary providers, despite geographic barriers. Further, even where providers exist in geographic areas, the inconvenience of travel can prohibit patients who would otherwise seek care from doing so.

Since the enactment of the Affordable Care Act, many private health insurers have created narrower coverage networks. In response to this activity, many states have imposed strict regulations on network adequacy. Network adequacy is used to measure the number of in-network providers who are able to see patients in a timely fashion. Some states impose strict standards, such as patient-to-provider ratios, maximum waiting times, and travel-related criteria. Expanded access to telemedicine provides an alternative method to ensuring provider networks meet requisite standards. In fact, in Missouri's recently released Request for Proposal (RFP) for statewide Medicaid managed care, the application asks the vendor to detail how telemedicine will be used in rural areas to ensure adequate access to primary, specialty, behavioral, and dental care.^{iv} This provision, however, does not mandate that telemedicine be used to maintain adequacy or ensure that a certain amount of providers are included in their network. Similarly, the state of Colorado will allow telemedicine to be used to fulfill a private insurers network requirements beginning in 2017, so long as the use of telemedicine is appropriate for that service and provider.^v

Challenges with Implementation

Despite the potential opportunities and benefits that telemedicine creates, there are still a handful of barriers that prevent comprehensive adoption and use. One of the challenges is cost of implementation. Although public and private insurance coverage is expanding for telemedicine, there are still expenses associated with delivering care through technology. Medical devices needed for remote services depend on the type of specialty. Even the cost for primary care devices can range from \$5,000-10,000.^{vi} Moreover, the software and hardware required to conduct videoconferencing alone can cost \$1,500 - \$10,000 per patient site. Another issue that is particular to remote and rural communities is the lack of broadband and internet connections. In 2013, the state of Missouri released the third report in the

MoBroadbandNow series, entitled “Understanding Internet Non-Adoption.” This initiative was established by Gov. Nixon to “expand and enhance broadband accessibility and adoption.” This report found that of the 88 percent of Missourians who report having internet in their home, only 71 percent have a broadband connection. Poor access to both internet and broadband connection is a significant issue for rural areas, but non-adoption rates for broadband in rural areas far exceeded that of non-rural areas (37% rural vs. 18% non-rural).^{vii}

To combat this problem, the US Department of Agriculture (USDA) created new funding streams in 2014 to help communities and businesses obtain access to broadband. The Community Connect Grants program provides up to \$13 million in funding to help rural communities set up broadband in an effort to expand economic opportunities in education, employment, health care, and public safety. There are also Distance Learning & Telemedicine Grants that are used to help rural communities attain better access to health care training and other resources. Awards for Distance Learning and Telemedicine Grants range from \$50,000 to \$500,000. The State of Missouri also established grants for rural hospitals to develop broadband support.

Another obstacle to using telemedicine more broadly is the lack of patient and provider engagement. Many providers do not wish to administer care through telecommunications and videoconferencing. Even if physicians and providers are open to this delivery method, the training and costs could be a disincentive. Moreover, both patients and providers fear that telemedicine could lead to the collapse of the clinical relationship. Just as certain providers prefer to deliver care through face-to-face encounters, many patients want to maintain an in-person relationship with their nurse, doctor, or therapist. Although not a majority, one study found that 21 percent of patients felt their telemedicine interactions were less personal.^{viii}

Policy Changes in Missouri

During the 2016 legislative session the Missouri General Assembly passed [SB 579](#), and in June of 2016, Governor Nixon signed this legislation into law. SB 579 includes language that expands the use of telemedicine within the state of Missouri. This bill uses the terms “telehealth” and “telemedicine” interchangeably and defines them as “the delivery of health care services by means of information and communication technologies which facilitate the assessment, diagnosis, consultation, treatment, education, care management, and self-management of a patient’s health care while such patient is at the originating site and the health care provider is at the distant site.” The statutory language also includes asynchronous store-and-forward technology in the definition of telehealth and telemedicine.

The law authorizes any health care provider to deliver services through telemedicine, so long as such services fit within their scope of practice and they can meet the appropriate standard of care. Scope of practice is defined through state medical and professional boards, and is sometimes developed with guidance from statutory language. If a physician chooses to use telemedicine there must be an established physician-patient relationship. This can be done in one of three ways: by conducting an in-person interview and examination; by consulting with another physician who has a relationship with the patient; or through a telemedicine consultation if the standard of care does not require a face-to-face encounter. The last option allows a provider to establish a relationship with their patient during the telemedicine encounter; however, the law further outlines what criteria must be met to meet the standard of care for this encounter.

In addition to expanding the use of telemedicine across all health care providers, the law also requires MO HealthNet to provide reimbursement for a limited number of services delivered through asynchronous store-and-forward technology. Allowable services include ophthalmology and optometry

in case of diabetic retinopathy, burn and wound care, orthopedics, dermatology, maternal-fetal ultrasounds, and dental services that require a diagnosis. Until this legislation passed, Missouri did not reimburse for asynchronous telehealth services.

The Department of Social Services (DSS) is charged with the duty of creating rules that govern the use of store-and-forward telemedicine in the MO HealthNet Program. Any proposed or finalized rules should include information on appropriate care standards, timelines for consultations, security and privacy criteria, payment for providers, and other relevant considerations on implementation and maintenance. The Telehealth Services Advisory Committee was created under the law to make recommendations to the Department of Social Services and propose rules on telehealth coverage in the MO HealthNet program. The Committee will be comprised of diverse stakeholders, both in the public and private sectors, who will be appointed by the Governor with the advice and consent of the Missouri Senate.

The providers eligible to receive payment for asynchronous store-and-forward services under the MO HealthNet program include any provider of mental, medical, optometric, or dental health services and “all other medical disciplines”. This seems to illustrate that the intent of the law is to allow for broad use of store-and-forward technology by various health care providers. The law later designates which providers may use all telehealth services under the MO HealthNet program, which includes a comprehensive list of providers with all licensure levels. Under previous rules, many providers, such as licensed professional counselors, providers in rural health clinics, optometrists, and podiatrists were ineligible for reimbursement under MO HealthNet. The law expands the list of eligible providers to include the aforementioned clinicians, as well as other mid-level practitioners.

One of the most significant provisions in the law is the extended list of authorized originating sites where a MO HealthNet enrollee may receive services. Prior to this legislation, a patient could only receive telehealth services if they were located in a clinical setting such as a hospital, clinic, nursing home, or rehabilitation center. The statutory language added schools, patient homes, clinical areas in pharmacies, and child assessment centers to the list of authorized originating sites. The broader list of originating sites, especially the inclusion of schools and homes, helps to increase access points to care by minimizing barriers that create disruption and inconvenience.

The final major revision established by the new law is the creation of a home telemonitoring program for certain MO HealthNet beneficiaries. The viability of this program depends on the legislature allocating funds to support it. If such funding exists, the DSS must develop the program to allow physicians to monitor patient data from the patients’ homes. Clinical information would be gathered by a home health agency or hospital and shared with the patient’s physician. Only individuals who have certain health conditions and exhibit two or more delineated risk factors are eligible to receive care via home telemonitoring. These patients are those that are the most vulnerable, but whose conditions can be managed through remote monitoring. After implementation, the Department must assess whether the program is cost-effective and whether it achieves any cost savings for either MO HealthNet or the Medicare program.

Existing Work & Case Studies in Missouri

Prior to the passing of this law, the American Telemedicine Association ranked Missouri as average in terms of telemedicine coverage and adoption across the state.^{ix} Policies on Medicaid coverage and eligible providers, services, and patient settings were deemed too restrictive. Nevertheless, Missouri ranked highly for its policies on private insurance parity and coverage for state employee health plans. The state has also had a well-established telehealth network, Missouri Telehealth Network (MTN),

which aims to improve access to care and emergency preparedness resources. MTN helps with initial development of telemedicine programs and provides technical assistance, outreach, and strategic planning to support the infrastructure.^x Another goal of MTN is to enhance the efforts of Show-Me ECHO - Extension for Community Health Care Outcomes. This program aims to use video-conferencing to convene primary care and specialist providers to develop and share best practices in a case-based learning environment. The goal is to close gaps in access by training primary care providers located in rural and remote areas to deliver some specialty services.^{xi}

As mentioned earlier, Missouri also awarded grants under MoBroadbandNow in 2012. These grants were part of the Rural Hospital Broadband Connection Project, which provided \$262,000 in funding to rural hospitals to expand the use of telemedicine to their patients. The money intended to increase broadband speed to better connect patients and providers via telecommunications and videoconferencing technology. The grants were distributed from December 1, 2012, through July 31, 2014. There were also round-two awards of up to \$100,000 given to four rural hospitals through the same time frame.^{xii} Unfortunately, there have not been awards since 2014.

Other telemedicine innovations that have developed in Missouri include telemedicine kiosks and the opening of a Virtual Care Center. In July 2015, the City of Kansas City placed a telemedicine kiosk in City Hall for employees and their families to use. The kiosk serves as a mobile health device that allows employees to connect with health care providers while remaining on site at City Hall. Upon entering the Kiosk, a registered nurse collects initial information to be given to the consulting provider. The remote provider then conducts an assessment and develops a treatment plan. This delivery model is equipped to handle minor illness and injuries and allows providers to prescribe appropriate medication, if necessary. The City has estimated that use of the kiosk has saved them approximately \$28,000, which can be attribute to productive hours gained and avoidance of high cost delivery settings.^{xiii}

Mercy health system created a Virtual Care Center in St. Louis that serves as a hub for providers who deliver care via telemedicine to other remote areas. The center does not house any patient beds or serve patients on-site. Instead, it retains 330 medical professionals who specialize in numerous practice areas to consult with referring providers across the nation. The Center is able to deliver care through a teleICU program, known as Mercy SafeWatch, where providers can remotely monitor patients. Mercy has reported that their teleICU programs have achieved a 35 percent reduction in average length of stay for patients. The Center is also enabled to provide home telemonitoring, on-call nursing questions, and diagnostic evaluations for stroke.^{xiv}

Conclusion

Telemedicine systems have evolved dramatically, with widespread policy and technology changes that have influenced adoption and payment reform. Despite lagging reform in the Medicare program, an increasing number of states are expanding telehealth insurance coverage, establishing payment parity, and incorporating telemedicine into their state's covered Medicaid services. In addition, federal agencies such as USDA and HRSA have created grant opportunities to help rural and remote communities develop telehealth and learning networks to serve rural and remote communities. Looking toward the future, telemedicine presents a unique opportunity to improve provider work force and access issues and bridge partnerships between rural and non-rural communities. Newly passed legislation and funding streams create an avenue for states like Missouri to bolster the existing telehealth infrastructure. By providing alternative delivery models and expanding the technological capacity of communities, states can embrace telemedicine to better serve populations in need. Developing a stronger foundation for telemedicine provides states with the ability to measure impact and effectiveness and analyze best practices for future use and policymaking.

Endnotes

- ⁱ U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, *Medicare Learning Network: Telehealth Services*, 2015. <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/telehealthsrvcfsctsh.pdf>
- ⁱⁱ Latoya Thomas and Gary Capistrant, “State Telemedicine Gaps Analysis: Coverage & Reimbursement”, American Telemedicine Association, January 2016.
- ⁱⁱⁱ Health Resources and Services Administration, Bureau of Health Workforce, *Third Quarter of FY 2016 Designated HPSA Quarterly Summary*, 2016. https://ersrs.hrsa.gov/ReportServer?/HGDW_Reports/BCD_HPSA/BCD_HPSA_SCR50_Qtr_Smry_HTML&rc:Toolbar=false.
- ^{iv} Missouri Office of Administration, *Managed Care Health Plan Request for Proposal*, (213), 2017.
- ^v Sandy Ahn, et al., “ACA Implementation – Monitoring and Tracking: Can Telemedicine Help Address Concerns with network Adequacy? Opportunities and Challenges in Six States”, Robert Wood Johnson Foundation, (5)2016.
- ^{vi} American Global Telemedicine, “I want to ‘do telemedicine’: What is involved and how much does it cost?”, July 9, 2015. <http://www.amdtelemedicine.com/blog/article/i-want-do-telemedicine-what-involved-and-how-much-does-it-cost>
- ^{vii} MoBroadbandNow, *Understanding Internet Non-adoption – Fulfilling Missouri’s Digital Promise*, 2013. http://mobroadbandnow.com/files/2013/01/non_adopters_report_22.pdf.
- ^{viii} Rajiv Leventhal, “Survey: Patients Interested in Using Telemedicine Services”, *Healthcare Informatics*, January 28, 2015. <http://www.healthcare-informatics.com/news-item/survey-patients-interested-using-telemedicine-services>.
- ^{ix} See *supra*, note ii at 54.
- ^x University of Missouri School of Medicine, “Missouri Telehealth Network - About MTN”, <http://medicine.missouri.edu/telehealth/about.html>.
- ^{xi} University of Missouri School of Medicine, “Missouri Telehealth Network – Show-Me ECHO”, <http://medicine.missouri.edu/telehealth/project-echo.html>.
- ^{xii} Office of Missouri Governor Jay Nixon, “MoBroadbandNow grants announced today by Gov. Nixon will help 11 rural Missouri hospitals provide better patient care through improved connections for telemedicine”, September 5, 2012. <http://governor.mo.gov/news/archive/mobroadbandnow-grants-announced-today-gov-nixon-will-help-11-rural-missouri-hospitals>.
- ^{xiii} Ashley Jost, “KC to employee: No more excuses not to see a doctor”, *Kansas City Business Journal*, July 2012. <http://www.bizjournals.com/kansascity/news/2015/07/09/kc-to-employees-no-more-excuses-not-to-see-a.html>; See also, Phil Galewitz, “Office Chatter: Your Doctor Will See You in this Telemedicine Kiosk”, *Kaiser Health News*, June 21, 2016. <http://khn.org/news/office-chatter-your-doctor-will-see-you-in-this-telemedicine-kiosk/>.
- ^{xiv} Mercy Virtual, “Facts for World’s First Virtual Care Center”, 2015. <https://www.mercy.net/sites/default/files/files/mercy-virtual-fact-sheet-26350.pdf>; See also, Melinda Beck, “How Telemedicine Is Transforming Health Care”, *The Wall Street Journal*, June 26, 2016. <http://www.wsj.com/articles/how-telemedicine-is-transforming-health-care-1466993402>.