TELEMEDICINE

OVERCOMING BARRIERS, REALIZING BENEFITS

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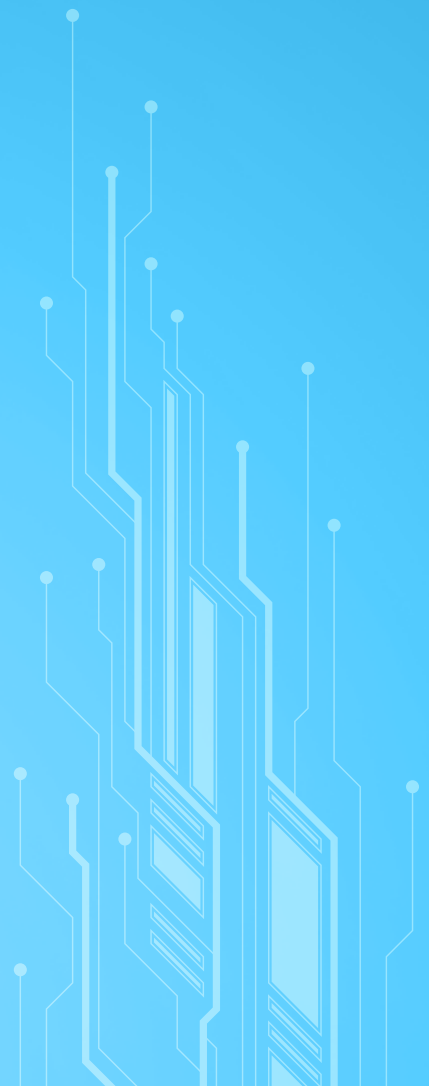
Introduction



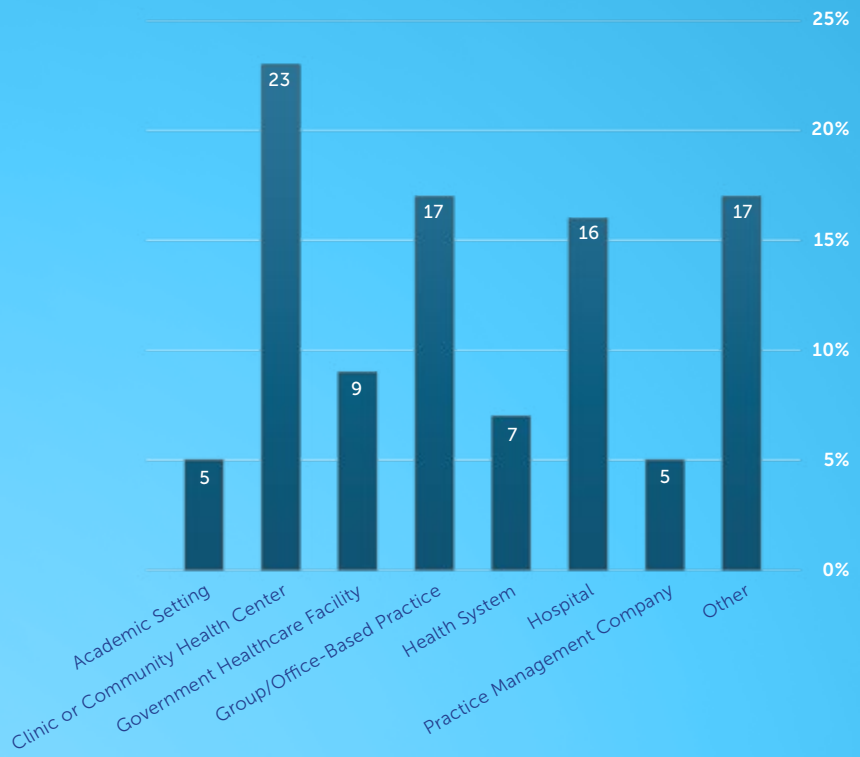
Healthcare technology is rapidly advancing and expanding due to more insured patients seeking access to healthcare providers, a shortage of physicians, and an aging and unhealthier population. Telemedicine is one of the fastest growing sectors of healthcare aiming to solve the problems arising with growing demand.

Telemedicine provides medical services to patients remotely through electronic devices, typically involving real-time communication between two sites. A report from BCC Research shows the global telemedicine market reached $19.2 billion in 2014 and is expected to increase to $43.4 billion by 2019. According to the American Telemedicine Association (ATA), more than half of all hospitals in the United States use some kind of telemedicine service.

Originally used to provide better access to care for rural patients, telemedicine has spread to serve veterans, mentally ill, elderly, poor and even incarcerated patients. All kinds of healthcare delivery systems now incorporate telemedicine into their delivery strategy, including hospitals, private practice and home health agencies. There are many electronic services provided through telemedicine; physicians can treat patients through online video transmittal, primary care physicians can consult with specialists, radiologists can read diagnostic images and medical professionals can monitor vital signs of patients.

LocumTenens.com surveyed clients about telemedicine, including the benefits and barriers, and asked about their current or future use of telemedicine as part of their healthcare strategy. The majority of survey respondents were from clinics or community health centers, group/office based practice systems and hospitals.

Which of the following best describes your organization?



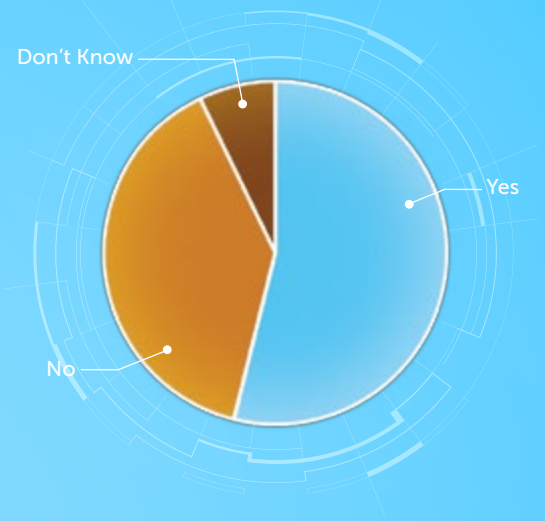
Current and Future Use of Telemedicine

According to the LocumTenens.com survey, a little more than half of respondents currently utilize telemedicine services, slightly more than a quarter of them plan to use it at some point in the future, and most of those considering it see themselves utilizing it within the next year.

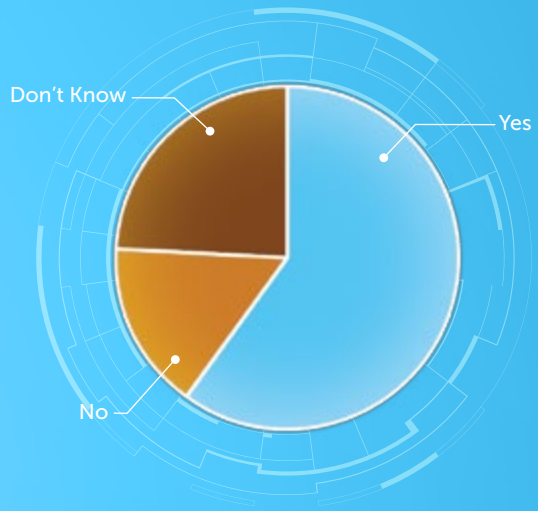
The most common types of service offered by survey respondents, including those from hospitals, consist of psychiatry, radiology, neurology and cardiology; about 50 other specialties were also selected or written-in as telemedicine services currently offered by survey respondents. These are on the next page.

Which of the following best describes your organization?

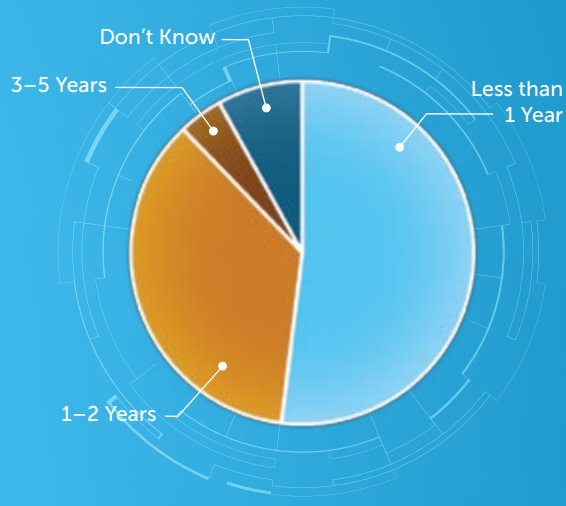
Does your facility currently utilize telemedicine services?



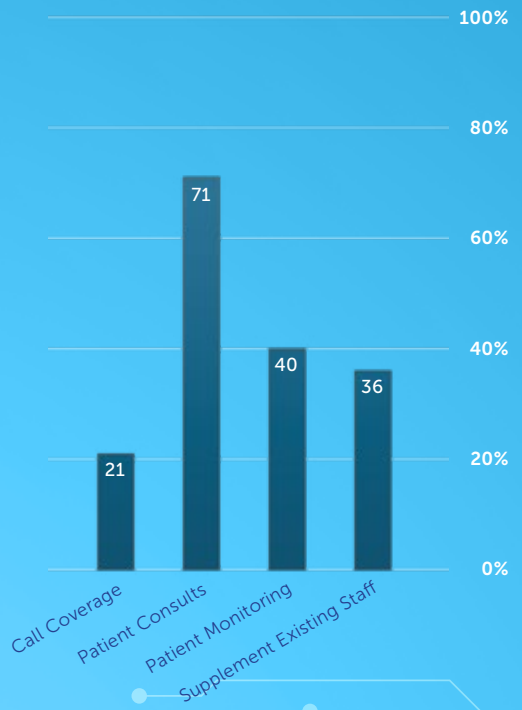
Does your facility plan to utilize telemedicine services at some point in the future?



When does your facility plan on utilizing telemedicine services?



How do you utilize or plan to utilize telemedicine services? (Select all that apply.)

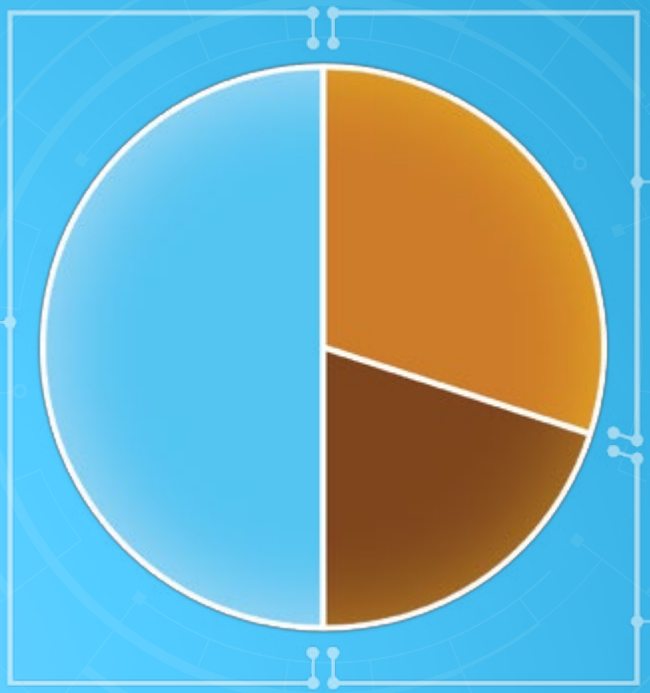


We asked healthcare facility administrators about their current or future use of telemedicine services and asked them to select all areas that apply. Seventy-one percent selected the use of telemedicine for patient consults, 40 percent said for patient monitoring, 36 percent said they chose it to supplement existing staff and 21 percent used it for call coverage.

Telepsychiatry is the most common form of telemedicine currently utilized by survey respondents, with 42 percent using it for adult psychiatry and 21 percent for child and adolescent psychiatry. Another popular response was teleradiology with 31 percent. Teleneurology was selected by 21 percent of respondents and 16 percent use it for cardiology. The survey directed recipients to select all specialties which applied.

Psychiatry (Adult)	42%	Emergency Medicine	8%	Pediatrics	5%	Proctology	2%
Radiology	31%	Family Practice	8%	Surgery – General	5%	Surgery – Pediatric	2%
Psychiatry (Child & Adolescent)	21%	Internal Medicine	8%	Podiatry	3%	Surgery – Plastic	2%
Neurology	21%	Endocrinology	6%	Physical Medicine & Rehabilitation	3%	Surgery – Orthopedic	2%
Cardiology	16%	Advanced Practice Professionals	6%	Pathology	3%	Ophthalmology	2%
Other specialty	15%	Rheumatology	5%	Otolaryngology/ENT	3%	Obstetrics/Gynecology	2%
Pulmonary medicine	10%	Hematology	5%	Surgery – Neurosurgery	3%	Surgery – other	2%
Dermatology	10%	Nephrology	5%	Infectious Diseases	3%	Radiation Oncology	2%
Oncology	8%	Gastroenterology	5%	Allergy & Immunology	3%		
Addictionology	8%	Hospitalist	5%	Anesthesiology	3%		

Current Opinions



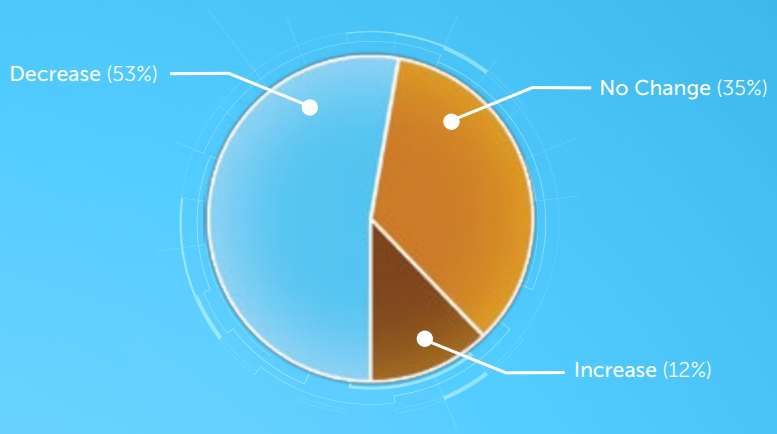
Almost half of respondents see the broad application of telemedicine as a key differentiator for their organization over the next several years.

Thirty percent are currently reviewing the opportunity to use telemedicine as a new or additional method of care deliverability.

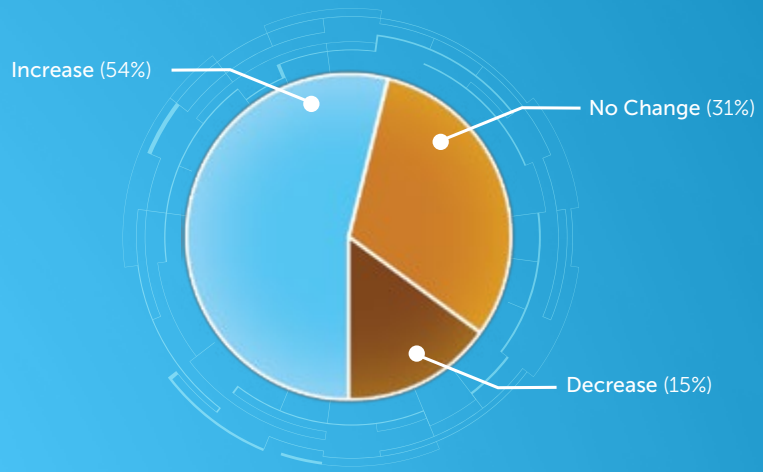
Twenty-one percent are unsure or have no plans to utilize telemedicine at this time.

We asked healthcare facility administrators if they thought the use of telemedicine will increase or decrease healthcare costs.

Effect of Telemedicine on Healthcare Costs



Effect of Telemedicine on Quality

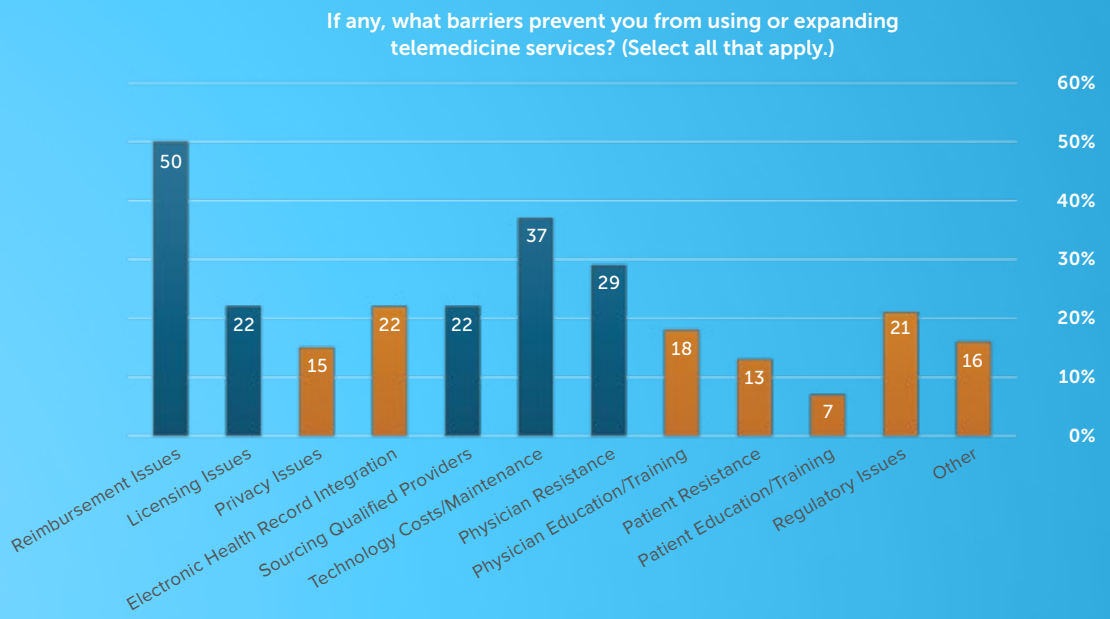


Effect of Telemedicine on Delivery Efficieny

Top 5 Barriers

There were five main concerns regarding telemedicine for healthcare facility administrators, based on the survey results. There are many obstacles administrators and practitioners must maneuver to provide successful telemedicine services, but due to rapidly increasing acknowledgment of the benefits of telehealth, legislative and educational barriers are falling.

The biggest concern, according to the survey, is about reimbursement issues, with half of all respondents worried or confused about being paid for telemedicine services. Technology costs and maintenance were considered a barrier by 37 percent, 29 percent find issues with physician resistance, 22 percent of respondents have problems with licensing issues and another 22 percent have difficulty sourcing qualified providers.



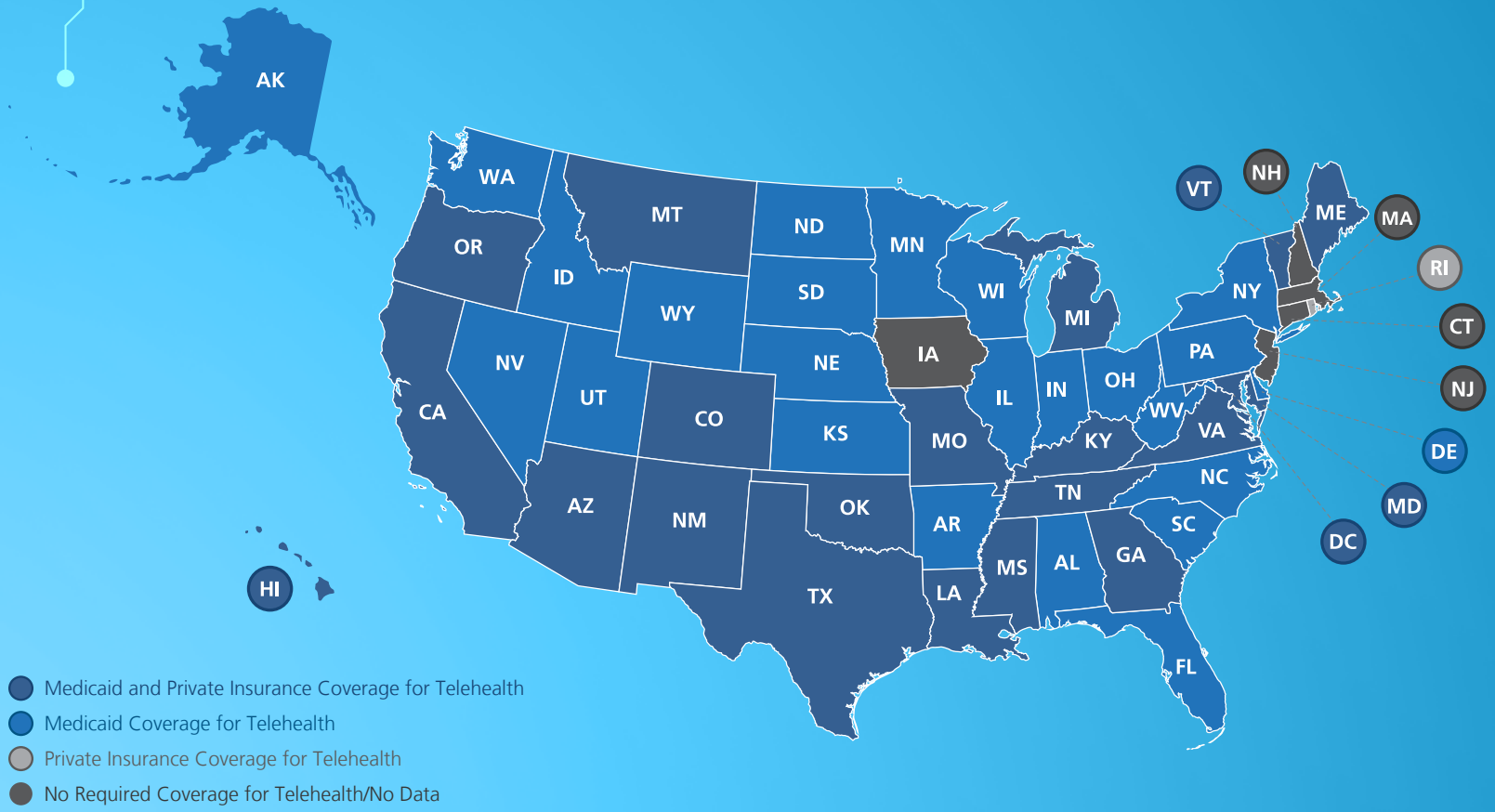
1 Reimbursement

There is a lot of confusion about which states provide telemedicine reimbursement through Medicaid, which states require private insurers to offer reimbursement and which types of services can be reimbursed. Currently, the federal Medicaid statute does not recognize telemedicine as a distinct healthcare service, and its services are not reimbursed differently than face-to-face encounters.

Initially, Medicare covered reimbursement for telemedicine in defined rural areas. The present reimbursement policy of the Centers for Medicare & Medicaid Services (CMS) covers originating sites that are located in areas that are labeled as rural health professional shortage areas (HPSAs) or sites not in metropolitan statistical areas (MSAs). Entities participating in federal telemedicine demonstration projects as of December 31, 2000 are also considered for reimbursement, no matter where the originating site is located. Some facilities may easily fall under one designation but not another, so CMS added a policy change in the final rule of the 2014 Medicare Physician Fee Schedule. This expands the coverage of telemedicine services able to be reimbursed by changing the way originating sites are defined as "rural."

The Telehealth Enhancement Act of 2014 (S.2662) is a bill proposed in Washington seeking to expand telemedicine coverage for Medicare beneficiaries and patients in remote locations. Its companion bill, the Medicare Telehealth Parity Act of 2014 (HR.3306), has also been proposed. This bill would expand the reimbursement policies for managing chronic diseases and illnesses.

Each state governs its own telemedicine coverage and if or how providers will be reimbursed. Most states have some form of Medicare reimbursement for telemedicine programs, and more and more states are requiring private insurers to cover telemedicine services as well.



Source: Center for Connected Healthy Policy (Map current as of March 2015)

2 Technology Costs/Maintenance

Considering telemedicine technology, and the potential costs, can be daunting. What is the cost of purchasing new software or hardware and what fees are involved in maintaining the equipment? Will the new process be difficult to use? Will physicians adapt to the new technology?

Fortunately, there can be minimal costs related to telemedicine services. The primary cost is often just the purchase or installation of equipment, which varies based on specialties. Equipment can just consist of a microphone and webcam, though some more advanced tools may be needed for certain services, like diagnostic or imaging devices. Be mindful that most telemedicine services do require service fees. However, there are many telemedicine companies that do not require any service fees, so the overall cost of installation is minor when maintenance fees are not a financial factor. Physicians can see more patients in a day and not have to worry about the costs of using telehealth services to treat the patients.

How safe is the information transmitted between the two sites? Is it still HIPAA-compliant? Telemedicine technology must follow privacy rules and regulations when transmitting patient information through electronic means and remain HIPAA-compliant. Software should have cryptographic mechanisms and access to electronic medical records (EMR) should have the ability to be controlled by the client, though some telemedicine service providers may not offer these features. They should also require screening of individuals who will have access to sensitive information prior to receiving access.

3 Physician Resistance

Part of the resistance some physicians give to participating in telemedicine programs is due to lack of understanding in how the system works and how the technology works. Primarily, physicians are wary of adapting to the new technological equipment they need in order to remotely treat patients. With better education by hospital or administrative staff in training physicians and nurses on how to use the technology, a healthcare system may have more success in overcoming resistance. This also includes education on more than just the technology and equipment.

Doctors can be confused about reimbursement issues, where they can practice with their licenses, what prescribing restrictions are in place and what rules and regulations they need to follow to comply with privacy laws. If telemedicine is incorporated into a health system's strategy, providers should receive comprehensive informative sessions and undergo proper training, which should include an emphasis on the benefits to them, the patients and the healthcare group to which they belong to ensure successful engagement.

4 Sourcing Qualified Providers/ Physician Shortage

Physician shortage is a huge crisis facing the entire U.S. healthcare system. Many facility administrators considering telemedicine are concerned about how to find and incorporate qualified providers into their strategic planning.

With fewer physicians from which to choose, hospitals and healthcare organizations face a harder time recruiting and worry about how much they need to spend on candidates or how long to search for them, especially with high physician turnover. According to the 2013 Association of Staff Physician Recruiters In-House Physician Recruitment Benchmarking Report, physician turnover has been steadily increasing over the past three years, rising from 5.6 to 7.2 percent.

Newly-insured patients through the Affordable Care Act will increase demand for primary care and specialist physicians. Fortunately, telemedicine offers some of the best solutions to the physician shortage. The primary care shortage in rural communities can be solved by increasing the number of physicians available to remotely treat patients. Retention rates in these rural areas may increase as doctors feel less isolated with the ability to access more patients and even peers through telemedicine networks.

There are also some questions for administrators regarding the qualifications the doctors will need to possess to provide remote services. Each doctor needs to be credentialed with the hospital and will need licensing issues resolved. There also needs to be agreements between health systems and management plans, especially when partnering between different organizations across state lines. Not only do physicians need to receive extensive education and training in how to follow the rules and regulations of incorporating telemedicine, but the healthcare organization needs training as well. The administrative staff needs to understand how to negotiate contracts between hospitals, doctors and private and public insurance payers.

5 Licensing

Requirements for state licensing hinder some physicians from treating patients located in states outside of the ones in which the physicians currently hold license to practice. Physicians can usually only practice medicine in any state in which they are licensed, though there are currently some exceptions.

In some cases, a physician may treat patients in a bordering state if he or she has an agreement or connection with a hospital or facility in that neighboring state. Doctors serving patients in the military, VA physicians and public health service officers only need to be licensed in one state to obtain the ability to practice in any state. Other exceptions include medical or residential teaching or training, reacting to medical emergencies or consultation between two medical personnel.

To reduce the licensing barriers, some states opt to use alternative forms of licensing agreements across states. The American Telemedicine Association website lists the following four models:

1. Licensure by endorsement "is currently used by most state boards to grant licenses to health professionals licensed in other states that have equivalent standards."
2. Mutual recognition "is a system in which the licensing authorities voluntarily enter into an agreement to legally accept the policies and processes (licensure) of a licensee's home state."
3. Reciprocity agreements "are between two or more states in which each state gives the subjects of the other certain privileges, on the condition that its own subjects shall enjoy similar privileges at the hands of the latter state."
4. Special purpose or limited licenses "allow health professionals to have the option of obtaining a limited license for the delivery of specific health services under particular circumstances in addition to holding a full license in the state where they primarily practice."

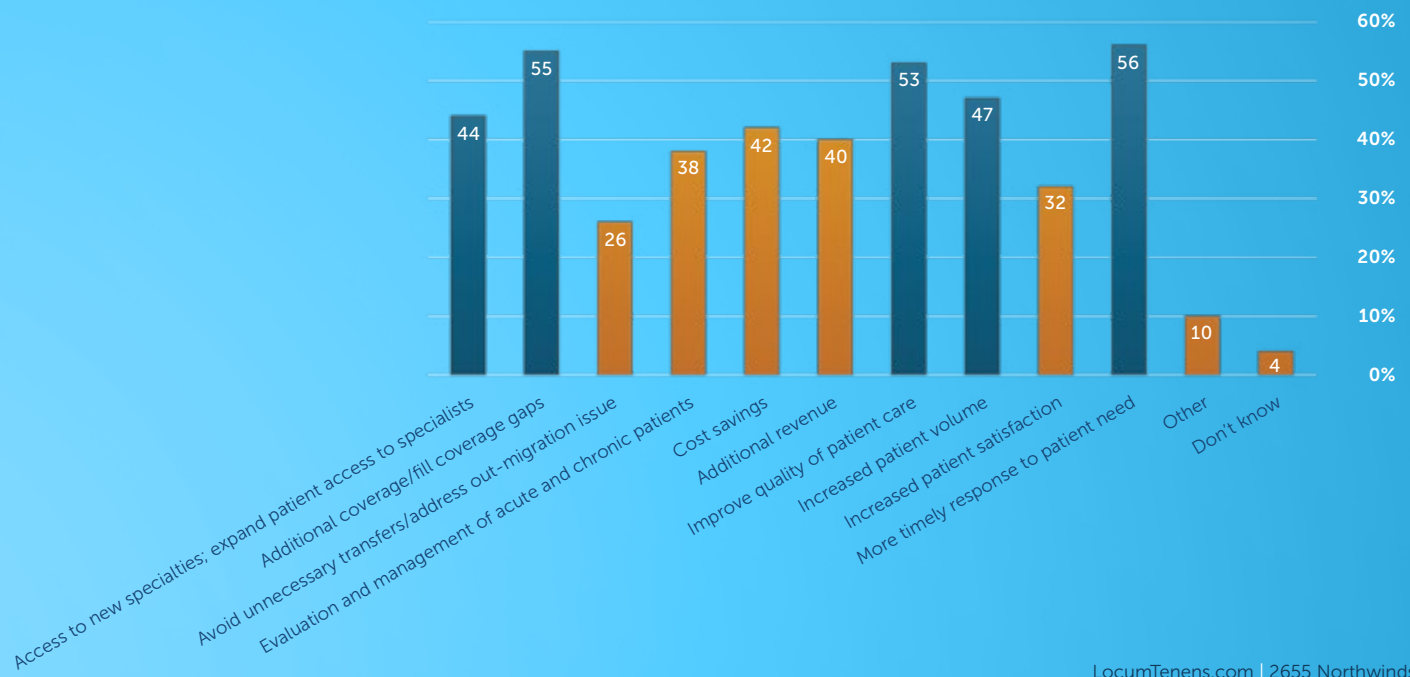
Proponents of telemedicine are fighting to remove the licensing barriers currently in place. A proposal for an interstate medical licensure compact was proposed in Washington last year aiming to allow doctors to practice medicine across state lines and reach more patients. Called the TELEmedicine for MEDicare (TELE-MED) Act (H.R. 3077), this bill would update the laws to reflect the advancements in healthcare technology and allow qualified physicians to have easier access to provide remote care.

The Federation of State Medical Boards is working on a proposal for an interstate medical licensure compact, which should be ready for consideration in state legislation by 2015. The Interstate Compact for Physician Licensure would facilitate the licensing process for physicians who want to practice in multiple states, including for telemedicine services.

Benefits

Use of telemedicine has increased more in the last decade than it has since its inception decades ago. The LocumTenens.com survey offered a list of potential benefits and asked recipients to choose any they have seen or plan to see by using telemedicine services. The majority of respondents agreed telemedicine will improve quality of patient care, will create a more timely response to patient need and will provide additional coverage and fill gaps. Other benefits that many recipients responded as seeing or expecting included increased patient satisfaction, access to new specialties (and expanding patient access to specialists), cost savings and evaluation and management of acute and chronic patients.

If any, which of the following benefits have you seen or plan to see from utilizing telemedicine services? (Select all that apply.)



1 Improving Patient Access & Care Deliverability

One of the clearest benefits of telemedicine is patient access to care in rural areas, which also includes the ability to reach more than one doctor at a time. A primary care physician in a rural area can reach a specialist in an urban location or even another state to discuss a patient's health and can consult with the patient at the same time.

This is particularly important in rural emergency departments, where there is often a lack of experienced specialists. The Mayo Clinic (mayoclinic.org) conducted a study on the success of its telestroke network, which places robots in rural emergency departments to connect with neurologists in other community hospitals. The Mayo Clinic Telestroke Program has improved care deliverability and increased cost savings with the "hub-and-spoke" network. "When comparing a rurally located patient receiving routine stroke care at a community hospital, a patient treated in the context of a telestroke network incurred $1,436 lower costs and gained 0.02 quality-adjusted life-years over a lifetime."

One of the greatest innovators in its use of implementing a successful telehealth program is the Department of Veteran Affairs (VA). The VA requires only one active state license for a physician to be allowed to practice in any VA facility in the country. Since its implementation of telemedicine with unrestricted licenses, the VA has had tremendous success and increased consultations and patient satisfaction. In 2013, the VA reports 11 percent of their veterans received some form of telemedicine services. Approximately 608,900 patients participated in 1,793,496 episodes of telemedicine care. Patient satisfaction scores rose to a mean score between 84 and 94 percent. Home telehealth services reduces bed days of care by 59 percent and hospital admissions by 35 percent, and clinical video telehealth reduced bed days of care by 38 percent for mental health treatment.

According to the 2014 HIMSS Analytics Telemedicine Study, 42.5 percent of hospital and health system survey respondents stated they chose to incorporate telemedicine services to fill gaps in patient care. Of the hospital respondents, 44.3 percent said community remoteness was the cause of their gaps in care.

2 Cost Savings

While telemedicine equipment can come with an initial investment cost, the overall cost savings of offering remote services leads to a positive return on investment (ROI). A smaller number of physicians can treat more patients due to expanded areas of service, reduced time and money spent traveling between sites and more time available to treat more patients in a day. More access to specialized doctors reduces unnecessary transfers to hospitals where the doctors are physically present; instead, patients can be treated virtually through remote services by another doctor who consults with the specialist.

A 2012 study published in *Health Affairs* evaluated participating sites in a University of Pittsburgh Medical Center (UPMC) pilot between 2008 and 2010. The UPMC health plan aimed to transition primary care practices into patient-centered medical homes through the use of telehealth services. Participating sites attained a 160-percent ROI compared to nonparticipating sites, had decreased emergency department visits and saw fewer admissions and readmissions.

Many hospitals that incorporate telemedicine into their structure see revenue increase. A study published in the journal of *Telemedicine and e-Health* showed the financial improvement in a children's hospital by implementing telemedicine strategies. Researchers from the University of California Davis Children's Hospital in Sacramento examined billing records for patients transferred from hospitals with telemedicine services between 2003 and 2010. After telemedicine was put in place, "the average hospital revenue increased from $2.4 million to $4.0 million per year, and the average professional billing revenue increased from $313,977 to $688,443 per year." A summary of the report can be found on FiercemobileIT.com.

3 Improving Quality

The ACA builds on the trend of holding physicians and healthcare facilities accountable for quality services provided and reimburses by value-based measurements instead of fee-for-service. Telemedicine services can improve the quality of patient care by reducing readmission rates and bed stays and also by increasing patient satisfaction.

Geisinger Health System continues to have tremendous success with telehealth programs. Its patient-centered medical home program, ProvenHealthNavigator, consists of a team of medical providers run by a primary care physician. Since its inception, the program has achieved a 15–18 percent decrease in annual hospital admissions and a 22 percent decrease in annual readmissions. Seventy-two percent of patients "thought the quality of care was better after working with a PHN case manager" through telemedicine services.

4 Meeting Patient Demand

As people have become more accepting of technology in their lives, they have also begun to embrace telemedicine as patients.

Through telemedicine, remote patients can interact more often with their doctors and nurses and keep better track of their own health. By being held responsible for monitoring their conditions, patients are more apt to follow the proper guidelines in maintaining their health. The results of a study included in an issue of the journal *Telemedicine and e-Health* found that patients "reported high levels of satisfaction... as they received efficient feedback, were better able to identify changes in their health status, and experienced enhanced accountability, self-efficacy, and motivation to make health behavior changes."

Patients also feel they have closer relationships and deeper trust regarding their doctors. Physicians can gain better understanding of their patients if they check in more frequently with the use of telemedicine tools. Instead of quick phone calls, patients and doctors can communicate through live video and obtain a more comprehensive conversation.

Incorporating Telemedicine

As the demand for quality care increases at the same time as technology advances, healthcare facilities need to adapt to more efficient methods of treating patients.

The LocumTenens.com survey of leaders at U.S. healthcare facilities illustrates that about half of respondents at least see the broad application of telemedicine as important to their facility's future and are making steps to implement programs in the next two years. Thirty percent are considering it, indicating U.S. healthcare facilities see telemedicine as a crucial strategic component. Only 12 percent think it will increase costs and 15 percent believe there will be a decrease in care quality. A whopping 80 percent of survey respondents think telemedicine will increase care delivery efficiency.

The American Telemedicine Association reports that nearly half of U.S. hospitals now use some sort of telemedicine application or platform. What concerns are keeping half of U.S. hospitals out of the game? Concerns do remain, but with effective research and modeling, these doubts can be overcome. The following guidelines offer some suggestions for facilities incorporating telemedicine services.

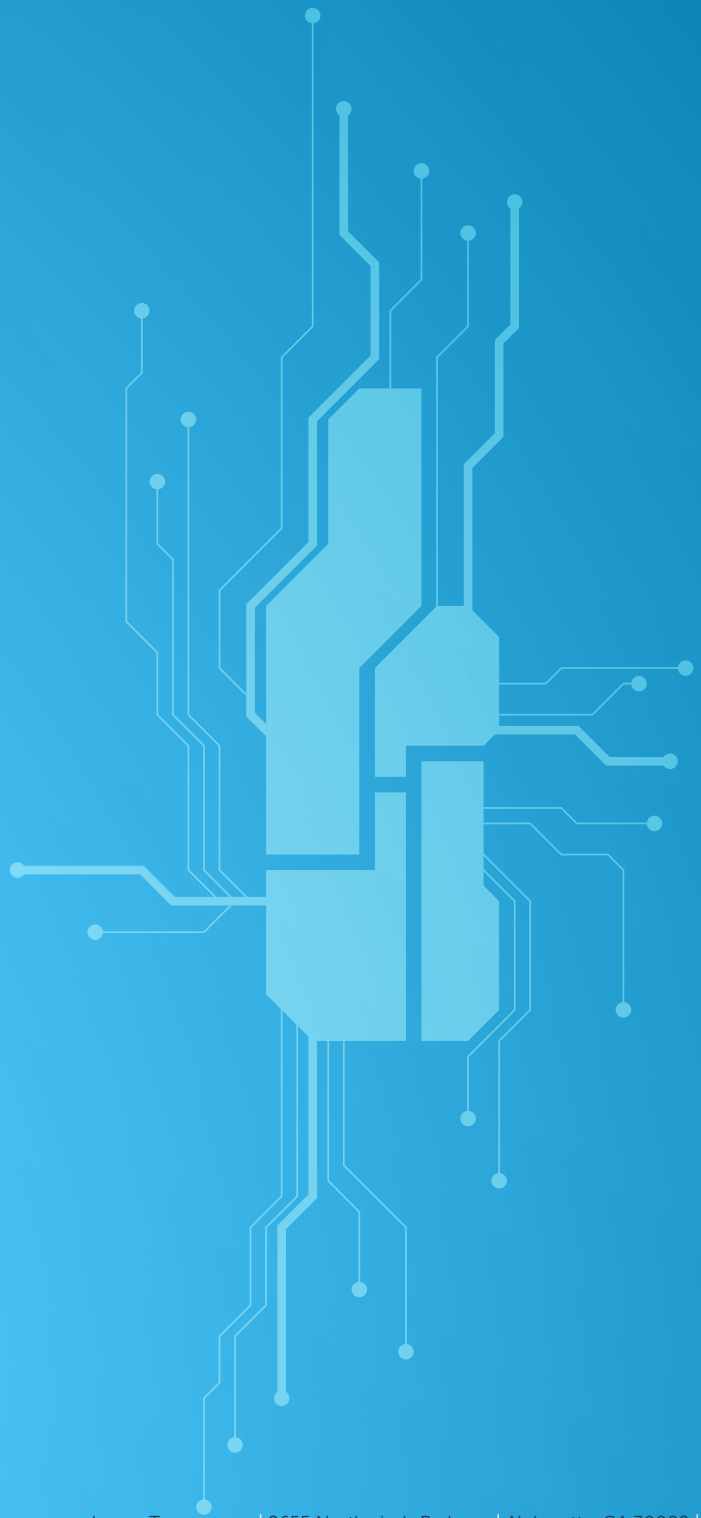
1. Before implementing a telemedicine strategy, administrators need to determine how their facility will fare with current reimbursement practices. In some cases, even if reimbursement by private payers is not required, many have shown a willingness to work with healthcare facilities anyway.

2. To overcome resistance, healthcare leaders should educate and train their staff and their physicians about the new technologies, privacy regulations and procedures. A patient education component to overcome patient resistance is also helpful.

3. Choosing the correct technology, or even the correct telemedicine service provider, is imperative to ensure success.

4. Administratively, organizations need to make sure that licensure and certifications are up-to-date and accurate, that malpractice coverage complements their telemedicine strategy and that HIPAA compliance is always ensured.

5. Finally, outdated regulations and reimbursement policies still remain a barrier for many hospitals. Monitoring constantly-changing legislation, and even lobbying on proposed legislation, should be important for healthcare organizations that see telemedicine as a means to improve access to quality care and ensure financial stability.



About Us

Since 1995, LocumTenens.com has been helping the nation's leading hospitals and healthcare providers with their physician staffing needs, ensuring patients have access to healthcare whenever or wherever needed. For the past four years, we have partnered with clients to extend their physician staffs onsite or virtually through state-of-the-art telemedicine services. With the country's healthcare system facing a physician shortage, an aging and unhealthy population and more insured patients with access to care delivery networks, telemedicine is a natural way for healthcare providers to improve efficiency, lower costs and serve more patients.

LocumTenens.com offers telemedicine services in the following specialties: psychiatry, neurology, primary care and emergency medicine.

Our Partnerships

LocumTenens.com and REACH Health have formed a partnership to provide a comprehensive, clinically proven teleneurological solution. By providing both the technology and the board certified neurologists, facilities can address the neurological care of patients presenting to the emergency department or clinical care setting. LocumTenens.com also partners with Virtual Medical Staff, which offers a comprehensive telemedicine solution providing healthcare facilities with physician staffing, telemedicine technology and the technical support needed to provide patients with virtual specialty care and consults.

Learn More

To learn more about LocumTenens.com telemedicine services, contact us today at info@locumtenens.com or by calling 800.562.8663.