

Telemedicine

Connect to Specialists and Facilitate Better Access to Care for Your Patients



CME
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How will this module help me?

- 1 Outlines four steps to assist you in adopting this technology
- 2 Answers questions about benefits and challenges of remotely monitoring patients
- 3 Describes how others successfully use telemedicine



Introduction

What is telemedicine?

Telemedicine (sometimes used interchangeably with “telehealth”) encompasses the following:

- Real-time, audio-video communication tools that connect physicians and patients in different locations. Tools include interactive videoconferencing or videoconferencing using mobile health (mHealth) applications (apps) on a computer, tablet, or mobile device.
- Store-and-forward technologies that collect images and data to be transmitted and interpreted later.
- Remote patient-monitoring tools such as blood pressure monitors, Bluetooth-enabled digital scales, and other wearable devices that can communicate biometric data for review (which may involve the use of mHealth apps).

Verbal/Audio-only or written communication, including telephone conversations, emails, instant messages, faxes, and online questionnaires, are generally not considered telemedicine.

What does telemedicine-supported care look like?

Telemedicine-supported care can take many forms. Some examples are:

- Remote diagnosis of stroke to support the timely use of thrombolytic (clot busting) agents to help to reduce morbidity and mortality, improve patient outcomes, and lower overall costs of care.
- Delivery of telemedicine-supported obstetrical services to women at high risk for complicated pregnancies, possibly resulting in improved clinical outcomes, decreased infant morbidity and mortality rates, reduction in the number of days in neonatal intensive care and lower costs of care.
- Regular ophthalmologic screening of patients with diabetes for retinopathy in their primary care office, with the data interpreted by an ophthalmologist at another location.
- Remote monitoring of weight, blood pressure, and blood sugar to support better management of chronic illnesses such as heart failure, diabetes, hypertension, and chronic obstructive pulmonary disease.
- Use of digital mammography, virtual tumor boards and remote access to clinical trials to improve cancer care.
- Access to mental health services for children and adults, including emergency psychiatry services, utilizing two-way audio-video interactive services.

More information about using telemedicine for specialty consultation services is available through federally funded [Telehealth Resource Centers](#). In addition, [state medical boards](#) and national medical specialty societies have [educational resources and clinical practice guidelines](#) for physicians using telemedicine.

How can telemedicine help my practice and my patients?

When telemedicine supports care coordination and effective communication with and among a patient's primary care physicians and medical home, it can mitigate many of our nation's significant health care challenges, including fragmentation of medical care, disparities in access to health care, workforce shortages and misallocation of resources, such as specialists, in underserved or geographically remote locations. It supports an integrated systems approach that focuses on:

- Disease prevention
- Enhanced wellness
- Successful chronic disease management
- Better decision support for acute and chronic conditions
- Improved efficiency
- Higher quality of care

- Increased patient safety

Telemedicine may benefit a practice or organization by improving patient triage and clinical outcomes. For patients, using telemedicine may reduce the burden of travel to access care, enhance timely delivery of health care services, increase compliance with treatment plans, improve communication with health care practitioners and lower the cost of care.

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When integrated into coordinated health care systems, store-and-forward teledermatology can improve access to high-quality dermatologic care for diverse patient populations with many skin diseases.

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—Karen Edison, MD, Dermatology, University of Missouri, Columbia, MO



Four STEPS to Adopt Telemedicine in Your Practice

1. Familiarize Yourself with Federal and State Laws and Regulations.

2. Choose a Service Model that Works Best for Your Patients and Your Practice.

3. Assess Your Technology and Tech Support Needs for Successful and Legally Compliant Telemedicine Services.

4. Understand Appropriate Practice Guidelines to Initiate a Telemedicine Service Model.



1 Familiarize Yourself with Federal and State Laws and Regulations.

Before adopting telemedicine, familiarize yourself with the applicable state and federal laws and regulations. Some important factors to consider include:

- What are the relevant state medical licensure laws and regulations? If you're using telemedicine to treat patients in another state, do you need a license there? Is the Federation of State Medical Board's Interstate Licensing Compact part of the model?
- Are there any prescribing limitations? Does your state require a prior in-person visit or is a face-to-face (videoconference) visit sufficient before prescribing? Be aware that prescribing of controlled substances is further limited by federal law.

- Does your state require a prior in-person visit before a patient exam via telemedicine? What are the patient-physician relationship requirements for use of telemedicine under state law?
- Where will services be provided or made available to meet state law requirements?
- What are the relevant federal and state patient-consent requirements?
- How will you ensure that privacy and security requirements, including under Health Insurance Portability and Accountability Act (HIPAA), are met?
- Are you appropriately credentialed and privileged to provide telemedicine services? Remember to comply with documentation and record-retention requirements.
- Does your medical liability insurance carrier ensure significant coverage if you are practicing in other states or via telemedicine? Remember to inform your carrier of your intent to add telemedicine to your practice.
- Do the states you will practice in have a corporate practice of medicine doctrine? This can impact the legal structure of an entity that wishes to provide telemedicine services.
- Is reimbursement for telemedicine available? Do you understand the relevant telemedicine requirements and reimbursement structures for patients? Different payers have different reimbursement coverage requirements and reimbursement rates.

Because of the significant number of federal and state law issues and variations, your practice may decide to consult a qualified legal advisor for guidance. More information on the legal and regulatory environment surrounding telemedicine can be found on the American Medical Association's [digital health payment](#) page or through the [National Consortium of Telehealth Resource Centers](#).

Q&A

[How are my services covered? Will insurers pay for telemedicine appointments or do patients pay out of pocket?](#)

It depends on the patient's insurance coverage; coverage of telemedicine services varies by health plan, technology, and service. For example, Medicare reimburses for selected telemedicine services such as those conducted by certain identified distant-site clinicians using specific technology when patients are located at a rural originating site. More than 25 states have passed private coverage parity laws and more than 45 state Medicaid programs reimburse in some fashion for telemedicine services. Many insurers cover these services even in the absence of a state mandate. Increasingly, many patients who do not have coverage, if offered the option, will self-pay.

[When a physician refers a patient to a distant practitioner, are the initiating physician and the consulting physician both present during a telemedicine appointment?](#)

The answer may vary depending on applicable state medical practice laws and insurance plan coverage requirements. In general, however, the referring physician is not required to participate in the telemedicine encounter, so long as a “telepresenter” is in an appropriate location to facilitate the encounter, particularly when peripheral devices are used to support the evaluation of the patient in conformance with the standard of care for the condition being treated. A telepresenter is a person on site with a patient who helps the consulting physician conducting an exam via telemedicine with certain aspects of a physical exam, such as taking vital signs. As an example, use of an electronic stethoscope, ophthalmoscope, otoscope, or other devices in a hospital or clinic setting should be facilitated by a trained telepresenter. In contrast, a telemental health evaluation may not require the presence of a telepresenter. Medicare has specific requirements governing the use of telemedicine technologies, but there is variability among other insurers; therefore, it is important to conduct an environmental scan of applicable state law and your patient's insurers to become familiar with their telemedicine policies.¹ Whether both providers can be reimbursed for their services depends upon payer policies.

[Are there licensure, credentialing and privileging requirements that are applicable to telemedicine?](#)

Most states require that the telemedicine practitioner be licensed in the state where the patient is located at the time of the encounter. Before adopting telemedicine, make sure to:

- Contact your local Health Resources and Services Administration (HRSA)-funded [Telehealth Resource Center](#) for regional technical and policy assistance. These federally funded resource centers provide assistance in every state.
- Review the state-specific policy websites of the [American Medical Association](#), [American Telemedicine Association](#), and the [Center for Telehealth and e-Health Law](#).
- Ensure that you are adhering to appropriate federal and state laws and Joint Commission standards, including those related to physician and provider credentialing, privileging, and licensure.
- Consult with a qualified legal advisor.
- Review the [Federation of State Medical Boards](#) (FSMB) interstate medical licensure compact(s) that may impact multi-state licensure in your state.
- Ensure you are credentialed and privileged at the institution or entity to which you will be providing services.

2

Choose a Service Model that Works Best for Your Patients and Your Practice.

There are numerous service models that you could adopt in your practice. Examples of service models include:

- Providing direct care for your own patients using face-to-face videoconferencing, with or without peripheral devices, connecting to the patient's home; for example, to evaluate acute flu-like symptoms and decide if an in-person visit is needed.
- Serving as an originating site to connect patients to other physicians; for example, using videoconferencing to connect the patient, the primary care physician, and the hepatologist to establish a course of treatment for a patient with newly diagnosed hepatitis C.
- Serving as an originating site to connect to other physicians and offer services through store-and-forward consultation applications, where medical data or images are captured and then the data file is forwarded to a specialist at another location who reviews at a later time and provides feedback.
- Serving as a distant site where you provide consultation to physicians or other practitioners.
- Serving as a distant site consulting physician to offer services and follow-up visits to patients through offices or at the hospital, either through videoconferencing or through store-and-forward technologies.
- Contracting with a telemedicine services company to offer consultations to their current or new patients. The practitioner must be aware of all appropriate state and federal regulations regarding the establishment of a valid patient-physician relationship, including those related to prescribing and the need for an in-person physical examination or a face-to-face (videoconference) exam. Furthermore, physicians must ensure that such services are offered consistent with state laws and regulations. See AMA's policy [H-480.946 Coverage of and Payment for Telemedicine](#).
- Utilizing remote patient monitoring tools to manage chronic illnesses to supplement in-person care and possibly prevent hospital readmissions for patients in your practice. For example, devices such as electronic scales, glucometers, and sphygmomanometers can help remotely manage patients with congestive heart failure.
- Participating as a consultant on panels or boards for telemedicine service companies to offer direct-to-patient services, for payer-developed programs, or for telemedicine services companies. Physicians must ensure that such services offered are consistent with state laws and regulations. See AMA's policy [H-480.946 Coverage of and Payment for Telemedicine](#).

WHAT TYPE OF TELEMEDICINE SERVICE MODEL ARE YOU INTERESTED IN?

Developing a program within an existing health care system or through independent practice.

Providing urgent care or primary care for my existing patients.

Serving as a consultant to emergency departments, hospitalized patients, outpatients, or to other practitioners.

Serving on a panel for a telemedicine services company consistent with AMA policy H-480.946.

Offering remote patient monitoring services for my own patients.

AMA. *Practice transformation series: adopting telemedicine in practice*. October 2015.

Regardless of the model you choose, it is imperative to take into consideration all relevant federal and state laws as well as AMA and specialty society policies and best practices that will impact telemedicine practice.

Q&A

How are telemedicine visits scheduled? Does a consulting physician have dedicated hours for this type of appointment?

Each physician can determine his or her own preferences for scheduling telemedicine encounters. Those offering acute care services (such as stroke neurologists offering telestroke services to patients in emergency settings) generally offer services 24/7. Others may set aside time for elective video-based telemedicine encounters or take calls for these services after business hours. Clinicians providing direct-to-patient services for their own patients should make arrangements for initiating and managing those encounters, including integration into the patient's record. Those who offer such services with a direct-to-patient telemedicine services company will work according to the call schedule determined by that company. Arrangements should be made to ensure care coordination and communication with a patient's established medical home and consulting physicians.

Do patients provide their own vital signs for these interactions? Or are vital signs not considered in urgent care telemedicine visits?

Each physician should determine the need for vital signs and the safest and most appropriate approach to accurately obtain them. Some home monitoring programs incorporate measurement and recording of various vital signs. Where vital signs are important for evaluation and management, an in-person examination may be preferred.

Do physicians dedicate an exam room with good lighting and acoustics for telemedicine encounters or do these appointments typically occur in any exam room or in the patient's home?

There are preferred lighting arrangements and protocols for video-based telemedicine services. For example, the [American Telemedicine Association's Practice Guidelines](#) for Live, On-Demand Primary and Urgent Care recommends the following: "The provider shall determine the minimal acceptable levels of privacy, lack of distraction and background noise, and other environmental conditions that may affect the quality of the encounter, in particular when video-based services are offered. The provider's and the patient's room/environment should ensure privacy to prevent unauthorized access. Seating and lighting should be designed for both comfort and professional interaction. Both provider and patient should be visible and heard. Patients receiving care in non-traditional settings should be informed of the importance of reducing background light from windows or light emanating from behind them. Both provider and patient cameras should be placed on a secure, stable platform to avoid wobbling and shaking during the videoconferencing session. To the extent possible, the patient and provider cameras should be placed at the same elevation as the eyes with the face clearly visible to the other person."²



3 Assess Your Technology and Tech Support Needs for Successful Telemedicine Consultations.

It is important to select the right technology and adhere to state and federal privacy and record retention laws.

Patient privacy is imperative. The importance of selecting HIPAA-compliant videoconferencing, store-and-forward technologies, and electronic medical record (EMR) systems cannot be overstated. Keep in mind that many apps are not HIPAA-compliant and are not FDA-cleared or -approved. Use encrypted, password-protected systems and

Business Associate Agreements with technology partners to conform to all HIPAA regulations. Be mindful of state privacy laws and regulations.

You should:

- Understand relevant technical requirements for the service that will be provided (e.g., peripheral devices such as otoscopes, ophthalmoscopes, and electronic stethoscopes that may be required at the originating site).
- Select HIPAA-compliant technologies, hardware, and software, and enter appropriate Business Associate Agreements with technology vendors to conform to all HIPAA regulations. Keep in mind that many apps are not HIPAA-compliant and are not FDA-cleared or -approved. Wherever possible, conform to practice guidelines developed by specialty societies that may contain guidance on selecting appropriate technologies. Be mindful of state privacy laws and regulations.
- Ensure adherence to appropriate informed consent and documentation requirements. Encrypt data to help protect it from a privacy breach.
- Seek out devices and technologies that are interoperable.
- Ensure FDA clearance or approval of devices and mHealth apps and technologies when required.
- Find internet connectivity of sufficient bandwidth and quality of service to support the type of telehealth care you will be providing. Consult with your internet service provider if additional bandwidth is required for your telemedicine service model.
- Develop an emergency plan in case escalation of care is required or technology fails.

Technology guidance may be obtained from the [HRSA-funded Telehealth Resource Centers](#).

Vendor Information Intake Form

Use this form to evaluate health technology vendors whom you are considering as partners in telemedicine implementation. The form can be sent directly to vendors for them to fill out, or it can be used as a guide to build your own intake forms for your practice.

(PDF, 64 KB)

Q&A

[Does the patient need to sign an informed consent form for each telemedicine visit?](#)

Yes. Obtaining an informed consent form at each encounter is the recommended best practice unless services are provided in an emergency. Practitioners should ensure that documentation of the encounter in the patient's EMR, both at the originating site and the distant site, is a routine element of telemedicine practice.

4

Understand Appropriate Practice Guidelines to Initiate a Telemedicine Service Model.

Understanding technical, clinical, and regulatory requirements can help your practice successfully adopt a telemedicine service model.

Follow Appropriate Specialty Clinical Practice Guidelines.

Physicians should first check with their medical specialty society and state medical association to determine if specialty- or state-specific policies, guidelines, or resources have been developed. Many national medical specialty societies have begun updating policies and others are still developing clinical practice guidelines. You may also want to consider consulting clinical practice guidelines developed by non-physician organizations such as the [American Telemedicine Association](#).

Follow Technical Guidelines Where Appropriate.

The selection of the proper equipment for live, interactive consultations can be expensive and there is a large variety of options. The choice of technology is based on a number of factors, including the size of the budget for equipment, the specific imaging needs of the practice, and existing vendor contracts.

Ensure Appropriate Sustainability Models to Support the Types of Telemedicine Services Offered.

Several considerations should be made as you decide on whether to adopt a specific service model. The location of the remote consults should support HIPAA compliance and protect patient privacy. Identify how physicians will bill for services (contracted, fee-for-service, self-pay) and make sure that the practice has the ability to support billing for such services (e.g., Medicare example: GT modifier on Evaluation & Management (E/M) codes or GQ modifier on store-and-forward) of the new technology. Additionally, ensure that the practice has the ability to remain up to date and compliant with new laws and regulations as technology and its regulation/governance continue to evolve.

Adhere to All State and Federal Statutory and Regulatory Requirements that Impact Telemedicine Practice.

The legal environment for telemedicine is complex, with differing regulations and policies in each state.

Q&A

Where can I find specialty telemedicine resources?

The following national medical specialty societies have clinical practice guidelines related to telemedicine. Physicians are encouraged to contact their national medical specialty society for guidance if their society is not listed here.

- [American College of Radiology \(ACR\) White Paper on Teleradiology Practice](#)
- [ACR Society for Imaging Informatics in Medicine Practice Guideline for Electronic Medical Information Privacy and Security](#)
- [American Academy of Dermatology Position Statement on Telemedicine](#)
- [American Academy of Pediatrics Applications of Telemedicine](#)
- [American Academy of Neurology Resources on Telemedicine](#)
- [American Academy of Family Physicians Information about Telemedicine and Telehealth](#)
- [American College of Physicians Policy Paper on Telemedicine in Primary Care Settings](#)

Conclusion

Telemedicine is a technologically advanced method for remotely managing acute and chronic conditions. Telemedicine service models can benefit patients and physicians by providing access to specialist care, reducing costs and improving patient outcomes when it supports care coordination, and communication with a patient's health care team (in-person and virtual). This educational module gives an overview of the numerous telehealth models, state and federal regulatory considerations, technology requirements, and considerations for ensuring patient privacy during telemedicine encounters.

Case Reports

1

Telemedicine Case Report: University of Virginia Health System

For acute stroke patients, any delay in receiving care increases the risk of damage and disability. Vascular neurologists Nina Solenski, MD, and Andy Southerland, MD, at the University of Virginia (UVA) Health System understand the “need for speed” when providing tissue plasminogen activator (tPA) or endovascular procedures to these patients. Both experienced the frustration of having no treatment options for patients who arrived in the Emergency Department (ED) past time-sensitive treatment windows, so they designed a streamlined telemedicine system of care for their patients. This telestroke approach encompasses a prehospital and a hospital ED-based model.

Dr. Southerland's mobile telestroke model, iTREAT, allows emergency medical service (EMS) providers to rapidly videoconference with the remote on-call neurologist during prehospital transport. This is done using low-cost, “off the shelf” technology: a mobile device, 4G commercial broadband and HIPAA-compliant encrypted software. The portable system is deployed in the ambulance to facilitate a livestream neurological exam conducted by the remote neurologist prior to the patient's arrival to the ED. This consult saves valuable time and enables faster treatment. The technology is still in the live-testing phase but has shown promise in feasibility and simulation models. Deployment for widespread clinical care is anticipated later this year. Prehospital telestroke models would be particularly beneficial for rural health systems where EMS ground transport times are longer and a geographic disparity exists in accessible primary stroke centers.

David Cattell-Gordon, Director of the UVA Telemedicine Office, reflects that these innovative systems are, “really designed to help support patients from rural communities to get the care they need quickly. With a stroke, every minute matters. With this telestroke model, we're applying the blazing speed of the internet to life-saving decisions about therapy while patients are en route to the hospital.”

Dr. Southerland adds, “We are in a golden age of mobile telecommunications that is revolutionizing the way we do business, learn and interact as a society. We can take advantage of these rapidly evolving media to effect change in medicine as well. In our case, we are able to reach out more rapidly to acute stroke patients in low-access areas, and in some cases, before they ever reach the hospital.”

As the patient arrives at the ED, pulling a Stat-Pak[®] envelope rapidly activates an acute stroke alert. The envelope contains a pilot list of instructions for each member of the care team (e.g., physician, nurse, EMS and/or radiologist). A single toll-free phone call alerts the remote telestroke neurologist so that live videoconferencing with the patient and family can start within minutes of arrival at the ED. Telemedicine technicians in the background continuously monitor the audio-video quality and facilitate the transmission of vital brain CT scan images.

Dr. Solenski comments, “I often say to my patients that stroke is an ‘equal opportunity disease’ and similarly as a society we should be providing ‘equal opportunity treatment.’ Reversing geographic and economic barriers and specialist shortages using telestroke technology is a valuable tour de force whose future is now.”

The two-pronged telestroke approach also includes onsite education and training for the emergency providers, the community and healthcare practitioners. With education, the full continuum of stroke care is addressed, from risk factors to symptom identification to appropriate treatment. Each telestroke consult is reviewed quarterly for quality metrics and the data, along with any interesting case reviews, is presented to the originating hospital.

Another emerging telestroke model relies on collaborative partnerships between stroke neurologists and for-profit telemedicine services companies. Dr. Solenski comments that “specialists-on-call” (SOC), one of largest teleneurology consulting companies, curated an extensive database that can be analyzed to further refine the telestroke model. SOC hires highly experienced academic and practicing neurologists (and the scarce subspecialists) to provide on-demand teleneurology consultations on a flexible schedule. In this model, specialty

providers of acute stroke and other neurology services give consultations from their home or office, mitigating serious disparities in access to specialty neurologic care.

Drs. Solenski and Southerland have found that these models of telestroke care increase access to therapy, reduce the time to treatment and connect a growing network of stroke providers with low-access hospitals. The ability to screen out unnecessary transfers, such as stroke mimics, mild strokes, etc., results in higher patient retention in their own communities closer to family, and supports the local health care economy (e.g., nursing homes, physical therapy services, etc.). In addition, fully engaging the community, EMS and remote health care providers in regular stroke-related education results in strong, trusting partnerships among all stakeholders in the health care system.

Learning Objectives

1. Identify methods to select a telemedicine service model for the practice
2. List steps to determine the technology and support needed while following all applicable privacy, state, and federal laws
3. Describe appropriate practice guidelines to initiate a telemedicine service model

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