

Telemedicine and Telehealth

by Capella Healthcare



WHAT'S COVERED

In this lesson, you will compare telemedicine and telehealth. Specifically, this lesson will cover:

1. Definitions
2. Domains
3. Modes of Communication

1. Definitions

The definitions of telehealth or telemedicine vary somewhat from organization to organization:

Telemedicine is defined by the American Telemedicine Association (ATA) as “the use of medical information exchanged from one site to another via electronic communications to improve a patient’s clinical health status.”

Telehealth is defined by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services as “the use of electronic information and telecommunications technologies to support and promote long-distance clinical healthcare, patient and professional health-related education, public health, and health administration. Technologies include videoconferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications.”

Medicare also defines telehealth as “providing care via interactive audio and video telecommunications systems.”

The National Council of State Boards of Nursing defines telehealth as “the practice of nursing delivered through various telecommunications technologies, including high speed Internet, wireless, satellite and televideo communications.”

The Federation of State Medical Boards defines telemedicine as “the practice of medicine using electronic communications, information technology or other means between a licensee in one location and a patient in another location with or without an intervening healthcare provider.”



HINT

In the accompanying courses, the HRSA definition will be used throughout.

Telehealth is considered a tool, rather than a separate clinical service, to strengthen care delivery, medical practice support, and educational and preventative measures to patient care.

Though telemedicine is often used interchangeably with the term telehealth, there are specific restrictions on who can implement, provide, and use these services. Telehealth includes a broad range of technologies and services to provide patient care and improve the entire healthcare system to offer the delivery of remote healthcare services, such as:

- Patient consultations via videoconferencing
- Transmitting still images
- E-health with patient portals
- Remote monitoring of vital signs
- Continual medical education
- Consumer-focused wireless applications
- Nurse call centers
- Email
- Text messaging
- Remote data capture
- Surgical training

Telemedicine involves the use of electronic communications and software to provide clinical services to patients without an in-person visit. Telemedicine technology is often used for follow-up visits, chronic disease management, medication management, specialist consultations, and a variety of other clinical services that can be provided remotely via secure video and audio connections.



BIG IDEA

The ATA considers telehealth and telemedicine to be synonymous; they are often used interchangeably. For the purposes of this course, the term "telehealth" will be used since it is more representative of the broader realm of health-related services.



TERMS TO KNOW

Telemedicine

The use of medical information exchanged from one site to another via electronic communications to improve a patient's clinical health status.

Telehealth

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

2. Domains

There are three domains of telehealth: hospital and specialty care, integrated primary care, and transitions and monitoring.

Telehealth Domain	Description
Hospital and Speciality Care	Specialists see and manage patients remotely. <ul style="list-style-type: none"> • Tele-intensivists • Robotic Surgery • Telestroke
Integrated Primary Care	Mental health professionals, social workers, and other specialists work in primary care settings (e.g., Primary Care Medical Homes, Accountable Care Organizations) and provide consultation as part of the care team.
Transitions and Monitoring	Patients have virtual visits to check in with the patient and answer any questions, assist with self-management advice and coaching, and triage any issues they are having. Additionally, they can have remote monitoring devices that transmit data to the medical office for surveillance and management, such as glucose, blood pressure, weight, and pulse oximetry.

3. Modes of Communication

Telehealth facilitates a two-way (bi-directional) interactive communication between the patient and the healthcare provider. There are three main categories of modes of communication:

- **Asynchronous** (store-and-forward) is the transfer of data from one site to another site. A camera or similar device records (stores) an image that is then sent (forwarded) via telecommunication to another site for consultation. Common services include radiology, pathology, dermatology, ophthalmology, and wound care.

➡ **EXAMPLE** A radiologist at a remote facility could interpret an image and document findings in the electronic health record (EHR) for a physician to review at a later time, or a patient could upload medical records into the patient portal.

- **Synchronous** (real-time interactive services) uses live interactive technology to provide real-time interactions between the patient and a qualified healthcare provider.

➡ **EXAMPLE** Patient has a two-way audio and video communication visit with a provider. It can also be used to perform real-time diagnostic and treatment procedures from a distance, such as telestroke, where a remote neurosurgeon is shown on a video screen and interacts with the medical staff and the patient to determine a diagnosis and treatment plan.

➡ **EXAMPLE** **Mobile Health** or mHealth is another example of synchronous telehealth wherein healthcare visits are initiated and conducted on patient personal computers, mobile devices, or smartphones, and from the patient's preferred location vs. the clinical setting. It is convenient for the delivery of urgent care services and growing in popularity. Psychiatric care via a smartphone (telepsychiatry) highlights the benefits of healthcare delivery to high-risk patients in need of psychiatric services.

- **Remote Patient Monitoring** involves medical professionals using various technological devices to remotely collect and send data. It can have both synchronous and asynchronous applications.

➦ **EXAMPLE** Cardiac, fetal or blood glucose monitoring data can be transmitted in real-time situations to providers at other locations who use the data to make immediate treatment decisions.

Distant sites, also known as hub sites, are sites at which the physician or other licensed practitioner delivering the service is located at the time the service is provided via telecommunications system.

An **originating site**, also known as a spoke site, is the location of the patient at the time the service being furnished via a telecommunications system occurs. Telepresenters may be needed to facilitate the delivery of this service.



TERMS TO KNOW

Asynchronous

Store-and-forward transfer of data from one site to another site via telecommunication for consultation.

Synchronous

The use of live interactive technology to provide real-time interactions between the patient and a qualified healthcare provider.

Mobile Health

A type of synchronous telehealth where patients' personal devices are used to conduct healthcare visits; also known as mHealth.

Remote Patient Monitoring

The use of devices to remotely collect and send data.

Distant Site

The telehealth site where the physician or other licensed practitioner delivering the service is located at the time the service is provided; also known as a hub site.

Originating Site

The location of the patient at the time the service being furnished via a telecommunications system occurs; also known as a spoke site.

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Support

If you are struggling with a concept or terminology in the course, you may contact TelehealthSupport@capella.edu for assistance.

If you are having technical issues, please contact learningcoach@sophia.org.



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Telehealth

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Telemedicine

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