

# Telehealth: Technical Requirements

## Introduction

*by Capella Healthcare*



### WHAT'S COVERED

In this lesson, you will be introduced to technical requirements in telehealth. Specifically, this lesson will cover:

1. Defining Telehealth
2. Telehealth Activities
3. Telehealth Interaction Methods
4. Benefits and Limitations of Telehealth
5. Overcoming Objections to Telehealth

## 1. Defining Telehealth

The earliest form of telehealth was introduced in 1878 with the transmission of heart sounds over phone lines. In 1905, an electrocardiogram was also transmitted over phone lines. With the evolution of technology, additional modalities have become available through updates to Information and Communications Technology (ICT). Telehealth is increasing in use to assist the health professional with managing cases, interacting with other clinical staff, and providing patients with flexible health management options. In the current pandemic environment, the arrangement is necessary to improve patient outcomes when face-to-face interaction is limited.

The Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services defines telehealth 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.”

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## 2. Telehealth Activities

Telehealth offers a range of activities in healthcare, including medical administration activities, treatment, payment, education, and/or collaboration with medical specialists. Examples of activities include:

- Administration activities
- Team meetings
- Staff training
- Ongoing nurse education
- Medical treatment coordination
- Interaction between primary care and specialists on cases
- Non-urgent psychiatric visits
- Nurse case management

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## 3. Telehealth Interaction Methods

Telehealth patient encounters use three modes of communication (Centers for Disease Control and Prevention, 2020). The first is synchronous, which means that two-way conversation is real-time (live) between the Healthcare Provider (HCP) and patient. The second is asynchronous, where the dialogue between patient and HCP is conducted in a one-way message exchange. Examples include submitting messages or conducting online medical consultations (e-visits) for non-urgent prescription or health questions. The last is remote patient monitoring, whereby the patient has a wearable medical device or takes periodic measurements for review and decision support by the HCP. See the table below for examples by type.

Method	Definition	Example
Asynchronous	One-way messaging interaction between patient and provider	E-visit in EHR for non-urgent health concerns
Synchronous	Real-time interaction between HCP and patient	Primary care visit
Remote Patient Monitoring	Taking health measures remotely through medical devices or other technology	Subcutaneous blood sugar monitoring sensor

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## 4. Benefits and Limitations of Telehealth

Using telehealth as a method for case management has its benefits and limitations. Benefits are convenience, increase in compliance, expansion of healthcare offerings to other areas, and safety. Drawbacks include limited adoption or “buy-in” to accept telephone and videoconferences as a method for receiving physical and behavioral health services, potential issues with compliance, limited home network and device capability, and teaching staff observance of requirements and security hygiene.

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## 5. Overcoming Objections to Telehealth

According to HHS (2020), communication to patients to explain the availability of telehealth, the rationale, and the convenience of the option will aid patients in the acceptance of the care modality. Communication should include revised privacy practices, description of telehealth, information privacy and security measures, and technical set up. Please refer to the Office of the National Coordinator (ONC) for their [Patient Engagement](#)

[Handbook](#) for more information. If patients choose this service, they will need assistance on the initial setup of technology and environment and should hear a reiteration of the HCP's commitment to the patient's health. Ongoing education is necessary for staff to learn the technical and environmental set up needed for effective telehealth consultations. This ongoing education should include regulatory compliance and related privacy and security requirements.

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## Support

If you are struggling with a concept or terminology in the course, you may contact [TelehealthSupport@capella.edu](mailto:TelehealthSupport@capella.edu) for assistance.

If you are having technical issues, please contact [learningcoach@sophia.org](mailto:learningcoach@sophia.org).