

WHAT IS TELEMEDICINE?

According to NCI, telemedicine, also called telehealth, is the delivery of health care from a distance using electronic information and technology, such as computers, cameras, videoconferencing, satellites, wireless communications, and the Internet. Telemedicine can be **synchronous**, i.e., a two-way audiovisual conversation between a patient and a provider, or **asynchronous**, i.e., transmission and presentation of a recorded health history to a health care provider.



Types of Telemedicine

Teleconsultation

Presentation of a patient's health report by the primary health care provider(s) to an expert in another institution.

Teleinterpretation

Interpretation of a patient's test results, such as images obtained from a full-body scan, remotely.

Telesupervision

Presentation of a patient's information via shared screen electronically—either recorded or with patient present in person—to a senior clinician by a medical trainee (e.g., medical student) or other health care worker (e.g., nurse) using electronic means, such as PowerPoint slides.

Telediagnosis

Remote or concurrent transmission of results from physical exams, scans and/or lab tests to a specialist, such as a pathologist, for diagnostic purposes.

Televisit

Usual visit of a patient with his or her health care provider, but using videoconferencing software.

Telemonitoring

Signs or symptoms, as well as health records, of a patient communicated to a health care team by an electronic communication platform that is compliant with the Health Insurance Portability and Accountability Act (HIPAA).

Potential Benefits of Using Telemedicine

- **Increased access to health care** Allows access to health services that may not be available to patients locally.
- **Improved health care outcomes** Promotes continuity of care regardless of the location of the patient and the provider, thus improving overall health outcomes.
- **Decreased infectious exposure** Helps avoid exposure to infectious viruses, bacteria, and other pathogens.
- **Reduced costs and/or work-related adjustments** Saves time and money by eliminating the need to travel to the health care facility or to take too much time off work or to arrange for elder- and/or childcare.
- **Facilitated caregiver and family engagement** Allows caregivers and other family members to join, which can facilitate patient care.

Potential Drawbacks of Using Telemedicine

- **Widened health care disparities** Infrastructure that enables electronic communications, such as broadband Internet, computers, or smart phones, as well as digital literacy, are two key requirements for implementing telemedicine effectively. However, lack of access to both is disproportionately experienced by patients from medically underserved populations (including, but not only, those belonging to racial or ethnic minorities, those who are old, those with disabilities, or those living in remote rural areas) and may widen already existing disparities.
- **Rapidly changing policies and reimbursement rules** The fast-paced nature of telemedicine may make it harder for health care providers to keep up with health care laws, reimbursement policies, and privacy protections.
- **Costly initial implementation** Implementing telemedicine at a health care facility, including restructuring information technology staff, purchasing necessary equipment, and training clinicians and support staff, takes time and costs money.
- **Security of personal health data** The security of personal health data transmitted electronically is also a concern, which can be mitigated by employing a HIPAA-compliant telemedicine platform.