

TELEMEDICINE

Telemedicine is a means of providing medical treatment via video chat from a distance. Telemedicine has some advantages for patients as well as healthcare practitioners. Telemedicine is the practice of providing medical treatment via the use of digital technology such as computers and smartphones. In most circumstances, video conferencing is used in telemedicine. Some providers, on the other hand, choose to give care via email or phone messages.

Many people utilize telemedicine in collaboration with their regular doctor. Others use a telemedicine app to obtain virtual care.

EXAMPLES:

Telemedicine includes Medical imaging, video consultations, remote medical diagnosis and evaluations, tele treatment, and medication management are some of the examples of telemedicine.

Usage of Telemedicine

Doctors and patients can use telemedicine to determine whether the patient requires in-person therapy, give specific types of medical care, such as mental health therapy and mild infection assessments, prescriptions to be written or renewed, provide specific therapies, (such as speech and physical therapy).

When a patient has to exercise physical distancing or is unable to visit a healthcare center in person, telemedicine can help.

TYPES OF TELEMEDICINE:

There are three types of telemedicine:

- **Remote Monitoring**

It includes the use of technology healthcare devices to monitor one's health, and it's particularly effective in the management of chronic disorders including heart disease, diabetes, asthma, and a variety of others. It's also known as 'telemonitoring,' because it allows doctors to keep an eye on their patients' actions and conditions from afar.

- **Real Time-Interaction**

This is more equivalent to medical advice that may be obtained at any time and from any location without having to contact a doctor. Consultations, discussions, main counsel, follow-up meetings, and monitoring of chronic disease conditions can all be done via real-time video chats, phone conversations, or SMS. There are dedicated apps for this purpose that allow patients and clinicians to see and hear each other using secure software. This technique is effective.

- **Store and Forward**

All of the history, diagnosis, photos, tests, and videos are stored and given to healthcare providers who use this information to treat patients after a period of time in this type of Telemedicine service. This is especially important in rural locations where patients require a specialist or advanced health care and the information can be shared with them. This can help you save a lot of time and effort.

Pros and Cons of telemedicine

Benefits for patients

Lower Costs

According to some studies, persons who utilize telemedicine spend less time in the hospital, which saves money. Additionally, less travel time might imply lower secondary costs like daycare and petrol.

Preventive Care

Telemedicine might make it simpler for patients to get the preventative treatment that will benefit their long-term health. This is especially true for those who have financial or geographical constraints quality-of-care barriers Preventive telemedicine, for example, was found to enhance health outcomes in a 2012 study of adults with coronary artery disease.

Convince some time

Telemedicine allows patients to get care in the privacy and comfort of their own homes. This may eliminate the need for a person to take time off work or arrange daycare.

Slowing the spread of infection

Visiting the doctor requires being in close quarters with people who may be unwell. This is especially risky for persons who have underlying illnesses or have a weakened immune system. Telemedicine reduces the chance of contracting an infection when seeing a doctor.

Benefits for providers

Lower Overhead Responses

Providers who provide telemedicine services may have lower overhead costs. They may, for example, be able to pay less for front desk assistance or invest in an office space with fewer exam rooms.

Revenue streams

Clinicians may discover that telemedicine enhances their income by allowing them to deliver care to a larger number of patients.

Less risk of infection and illness

When clinicians meet patients remotely, they don't have to worry about being exposed to any germs the patient may be carrying.

Patient satisfaction

Patients may be pleased with their physician if they do not have to go to the office or wait for services.

Disadvantages of telemedicine for patients

Telemedicine is not covered by all insurance companies

Only 26 states presently mandate insurance companies to cover or pay telemedicine costs. These laws, on the other hand, are continually changing.

Protecting medical data

Hackers and other criminals may be able to get access to a patient's medical information, particularly if the patient uses telemedicine on a public network or through an unencrypted channel.

Delay in care

When a person requires emergency care, using telemedicine initially may cause treatment to be delayed, especially when a doctor cannot give life-saving care or laboratory testing online.

Disadvantages of telemedicine for providers

Licensing Rules

State licensing rules differ, and clinicians may not be permitted to practice medicine across state boundaries based on the state in which they hold their license and the state in which the patient resides.

Concerns about technology

Choosing the correct digital platform to utilize might be difficult. A poor connection might also make it difficult to provide high-quality treatment. Clinicians must also check that the telephone is in good working order.

TELEHEALTH

Telehealth is described as the use of technology to offer health care services over long distances. It might range from performing medical consultations via the internet to remotely monitoring patients' vital signs. Its definition is broader than that of telemedicine, which is limited to the delivery of health care through the internet. Training and continuous education are also part of telehealth.

EXAMPLES: Main examples of telehealth are live video conferencing, mobile health apps, electronic transmission, remote patient monitoring (RMP)

Use of telehealth

There are three ways to deliver telehealth:

- Synchronous telehealth when a doctor connects with a patient by computer or telephone in real-time.
- When data, photos, or messages are captured to be shared with the doctor later, it is said to be asynchronous.
- When measures such as weight or blood pressure are relayed to a health care professional through the internet, this is known as remote patient monitoring.

Pros of telehealth

Cost savings, convenience, and the ability to give treatment to persons with mobility constraints or those in remote regions who don't have access to a local doctor or clinic are all advantages of using technology to offer health care. Telehealth's popularity has soared in the recent decade as a result of these factors. Currently, 76 percent of hospitals in the United States have a system in place to link doctors and patients. Some advantages are listed below:

- Taking and reporting measures such as your weight, food intake, blood pressure, heart rate, and blood sugar levels to your doctor, either manually or by a wearable gadget.
- Using your computer or smartphone to have a virtual visit with your doctor or nurse.

- Checking your test results, requesting medication refills, sending a note to your doctor, or scheduling an appointment through an online gateway.
- All of the clinicians you see should have access to your test findings, diagnoses, prescriptions, and drug allergies.
- Coordinating your treatment with your primary care physician and any specialists you see, including exchanging exam notes and test results between medical offices in different locations.
- Receiving reminders through email or text when mammograms, colonoscopies, and other screenings, as well as routine vaccines, are due.
- At home, keep an eye on the elderly to make sure they are eating, sleeping, and taking their meds on time.

Cons of telehealth

Telehealth is a handy and cost-effective option to consult a doctor without leaving your house, but it does have certain drawbacks.

- It is not practical to conduct every form of a visit from a distance. You'll still need to visit the doctor for imaging tests and blood testing, as well as diagnoses that require more hands-on treatment.
- The safety of electronic transmissions of personal health information is an issue.
- During the COVID-19 epidemic, insurance companies are gradually paying the cost of telehealth visits, however, some services may not be completely covered, resulting in out-of-pocket payments.

Medical Informatics

The study and implementation of ways to boost the managing of patient data, clinical knowledge, demographic data, and other information related to patient care and community health care known as medical informatics. Medical Informatics is in charge of supplying that information. Medical informatics's purpose is to guarantee that vital patient medical data is available when and where it is required to make medical choices. Medical informatics is also concerned with the storage and administration of medical data for research and teaching.

EXAMPLES: Patient portals, electronic medical records (EMRs), telemedicine, healthcare applications, and a range of data reporting tools are just a few examples.

Pros of medical informatics

Demand is increasing

According to the US Bureau of Labor Statistics, demand for qualified health informatics workers will increase until the end of this decade.

Exceptional earning potential

Consultants and directors in health informatics receive a high yearly compensation, with some exceeding six figures.

Opportunities for employment

Directors of health informatics can operate in a variety of settings, from hospitals to businesses and pharmaceutical companies.

Cons of medical informatics

Stressful situation

The possibility of a security breach may be unpleasant at work. It might also be challenging to teach healthcare personnel who are technologically impaired.

Exhausting Work Hours

Health informatics directors frequently work more than 40 hours a week training teams, engaging with stakeholders and constituents, and monitoring clinical data systems.

Top Positions are in high demand

While there are several possibilities in health informatics, elite positions are in high demand. Directors of health informatics must have extensive experience, advanced education, and certification.