Telehealth: Is it enough?

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As healthcare systems all over the world become saturated, populations grow in size and age, and technology evolves at a pace never seen before, there is a growing need to update existing health systems. Luckily, there are also many opportunities for improvement. This potential is something that is generally accepted by governments and companies. However, the transition has shown to be a hard task.

One of the many technological advancements that can help healthcare systems evolve rapidly to meet growing demands is telemedicine. By using this technology, it is possible to transition efficiently and effectively towards better medical systems. Mobile and web apps can help do this, as many users already have some sort of device that can access the Internet.

Telehealth is defined as the delivery and facilitation of health and health-related services including medical care, provider and patient education, health information services, and self-care via telecommunications and digital communication technologies. Live video conferencing, mobile health apps, "store and forward" electronic transmission, and remote patient monitoring (RPM) are examples of technologies used in telehealth.

Advantages of telehealth

Using technology to deliver health care has several advantages, including cost savings, convenience, and the ability to provide care to people with mobility limitations, or those in rural areas who don't have access to a local doctor or clinic. For these reasons, the use of telehealth has grown significantly over the last decade. Currently, 76 per cent of hospitals in the U.S. connect doctors and patients remotely via telehealth, up from 35 per cent a decade ago. Telehealth has become even more essential during the coronavirus pandemic. Fears of spreading and catching the virus during in-person medical visits have led to a greater interest in, and use of, technology to provide and receive health care.

Several technologies are being deployed for telehealth including mHealth (or mobile health), video and audio technologies, digital photography, remote patient monitoring (RPM), and store and forward technologies.

mHealth -- Using smartphones and tablets for telehealth

mHealth or mobile health refers to healthcare applications and programs patients use on their smartphones, tablets, or laptops. These applications allow patients to track health measurements, set medication and appointment reminders, and share information with clinicians. Users can access hundreds of mHealth applications including asthma and diabetes management tools as well as weight loss or smoking cessation apps.

Additionally, mobile devices allow users to schedule appointments and communicate with providers via video conference and text message.

Video conferencing, video-scopes, and high-resolution cameras in telehealth

Clinicians are conquering distance and providing access to patients who are not able to travel by providing appointments utilizing real-time video communication platforms. Video conferencing technology has been utilized to provide care for inmates, military personnel, and patients located in rural locations for some time. They are also conducting virtual appointments using video/audio communication applications to reduce prisoner transportation costs and increase safety by keeping inmates in and providers out of correctional facilities.

Remote Patient Monitoring (RPM)

Remote Patient Monitoring involves the reporting, collection, transmission, and evaluation of patient health data through electronic devices such as wearables, mobile devices, smartphone apps, and internet-enabled computers. RPM technologies remind patients to weigh themselves and transmit the measurements to their physicians. Wearables and other electronic monitoring devices are being used to collect and transfer vital sign data including blood pressures, cardiac stats, oxygen levels, and respiratory rates.

Store and forward

Store and forward telehealth refer to the capture, storage, and transmittal of patient health information for asynchronous healthcare delivery using data storage and transmission technology. CAT Scans, MRIs, X-rays, photos, videos, and text-based patient data are gathered and sent to specialists and other members of a care team to evaluate patients and assist in their treatment.

Technologies used for store and forward telehealth include secure servers and routers that temporarily house incoming packets of information and then route them to the appropriate end-users. Secure email platforms are also used for store and forward telehealth.

Despite the current reimbursement challenges, there are numerous benefits to increasing the use of telehealth to meet the nation's demand for health care. The convenience of care, increased access, improved worker productivity from not having to take time off and travel to appointments, decreased costs, and clinician time savings are a few. For these reasons, providers, payers, and employers alike are moving forward with more and more telehealth solutions.