

Telehealth – Not an Innovation but an Unavoidable Force in the Healthcare Industry

Even though there were many questions and contradictions whether to embrace telehealth or not, nowadays it is a well-defined pilot that flies with its own speed and direction. For the past few years, healthcare experts and practices have raved about its undeniable benefits, while still having doubts over security and practicality. However, technology and acceptance have finally made telehealth a reality for everyone in the healthcare industry. According to many researchers and government officials, a steady stream of innovation is already being widely adopted and now it is time to extol the virtues of telemedicine. As an example, Latoya Thomas, the Director of State Health Policy at the [American Telemedicine Association](#) (ATA), sees telehealth as a delivery model that may not be familiar to everyone, but where it is available, it should be used.

People have never even imagined that healthcare may provide the best care with the least inconvenience. [The National Consortium of Telehealth Resource Centers](#) defines telehealth as a collection of means or methods for enhancing healthcare, public health, and health education delivery and support, using telecommunications technologies. At the same time, the federal [Health Resources and Services Administration \(HRSA\)](#) distinguishes telehealth as: “The use of electronic information and telecommunications technologies to support long-distance clinical health care, patient and professional health-related education, public health and health administration.”

Studies from the American Medical Association showed that 70% of doctors’ visits are informational and can be easily made by telephone or video calls. There are many different ways to share health information and engage with patients, physicians, and others. Traditionally, telehealth embodies four distinct domains known as:

– Video conferencing (real time) – two-way interaction between a person and a provider using audiovisual telecommunications technology. In this case, live video can be used for consultation, diagnostics, and

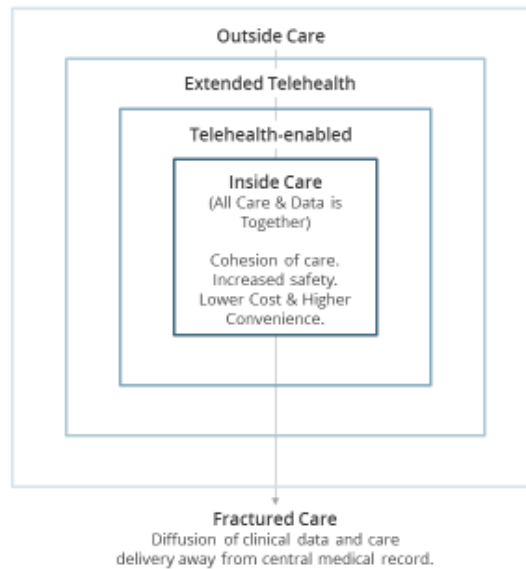
patient treatment. Real time telehealth solutions, such as transfer of still images, have been used in telepathology for many years as well as real time transfer of video images has been widely explored in telepsychiatry.

– Store-and-forward involves the transmission of a recorded health history (pre-recorded videos, digital images) through a secure electronic communications system to a specialist. Unlike a real-time technology, it provides access to data after it was collected, and involves communication tools such as secure email.

– Remote patient monitoring encompasses personal health and medical data collection from an individual in one location via electronic communication technologies, which is transmitted to a provider in a different location. As an example, recently healthcare IT giant Cerner and Truman Medical Centers have partnered up to create disease management programs that employ patient monitoring technology in patients' homes. The clinical application of patient monitoring devices is expanding at a fast pace as well. The latest news digest reveals some great examples to keep track of patients, such as a bracelet to predict asthma attacks through breath, a bra to detect the early signs of breast cancer, a wristwatch for those suffering with Parkinson's disease, and a hair clip for deaf people to convey sounds through the hair.

– Mobile health (mHealth) seems to be one of the fastest growing tendencies driving improvements in healthcare. Around 7 million patients have already been using various forms of mobile applications, and it is estimated to reach 50 million by 2020, according to a new [BCC Research report](#). Supported by mobile communication devices, mobile health is proved to improve patient compliance with treatment recommendations, reminding patients to take medications, educating about health issues, and better engaging in care. For clinicians it assists in solving some of healthcare's biggest problems, such as chronic disease management and clinical decision making.

Telehealth is not a single solution, but a more complicated concept where the choice of approaches depends on the interval between a patient and a primary care provider. One of the major concerns in healthcare is the fragmented nature of care with data loss and duplicated lab tests that result in conflicting information from doctors, eventually leading to hospital readmissions. The lack of proper coordination and other factors provide a reason to assert that care is anything but patient-centered. Patient safety depends enormously on integration of data back to the primary health record, as it assists in secure and safe data support and impacts care fragmentation. There are four models that show how individual telehealth solutions are contributing to integration and whether they are potentially fracturing care:



– Inside Care represents 100% of collected health record data. In other words, it may be called the “medical home”, “universal patient record”, supporting patient self-efficacy.

– Telehealth-enabled. As a care giver has already long-term existing relationship with a patient, telehealth technology is used here to capture all data. As an example, video-consultation enables more efficient and scalable care integration.

– Extended Telehealth. In this case, there is a risk of care fracturing, because of the sheer number of additional clinicians. For instance, remote monitoring by a nurse will include an additional care provider, but it will be still tightly connected to the care team.

– Outside Care – telehealth functions completely separately from the existing care team and only includes encounters, e-visits, patient apps and devices.

Recognizing the telehealth potential for the industry, there are multiple providers on the market, offering their own telehealth solutions to the problems above. The following table illustrates some examples of telehealth solutions for each telehealth domain respectively.

Samples of telehealth solutions

Name	Website	Video Conferencing	Remote monitoring	EHR Integration	Mobile version available	Deployment type
Lifecycle Health	http://www.lifecyclehealth.com/	+	+	-	IOS, Android	Cloud, SaaS, Web
Chiron Health	https://chironhealth.com/	+	-	+	IOS, Android	Cloud, SaaS, Web
<u>TeleCare</u> Record Manager Plus	https://www.dsinc.com/	-	+	+	-	Cloud, SaaS, Web
Virtual Care Management	http://snap.md/	+	+	-	-	Cloud, SaaS, Web

Although these solutions do offer a type of “out of the box” functionality, the complicated nature of healthcare industry sometimes imposes requirements that they are unable to meet, that leads to situations where the stock solution is just not enough. In these cases, there are custom software development companies capable of designing tailored-made teleconferencing solutions matching all requirements and evolving as the environment changes.

Telehealth is not an innovation anymore, now it is seen as a powerful topic for the coming years having a profound effect on every area of healthcare. As a means to increase convenience and scale quality, telehealth may raise the bar for the industry, leaving ones who cannot adopt it on time behind in a race for patients.

Resources:

<http://www.healthcareitnews.com/news/cerner-truman-medical-centers-launch-home-patient-monitoring>

<https://www.healthit.gov/sites/default/files/DesigningConsumerCenteredTelehealthVisit-ONC-WHITEPAPER-2015V2edits.pdf>

http://23je8jawagt19m8da2cje4yb.wpengine.netdna-cdn.com/wp-content/uploads/2015/11/Lochbridge_TelehealthArticle2.pdf

http://www.cchpca.org/sites/default/files/uploader/Telehealth%20Definintion%20Framework%20for%20TRCs_o.pdf

http://www.integration.samhsa.gov/hit/telehealthguide_final_o.pdf

https://www.duanemorris.com/articles/static/bilimoria_jmpm_0413.pdf

<http://blog.evisit.com/what-industry-experts-are-saying-about-telehealth>

Original article can be found here: <https://www.healthcareguys.com/2017/08/15/telehealth-not-an-innovation-but-an-unavoidable-force-in-the-healthcare-industry/>