

[Blog] Lights, Camera, Telehealth!

Episode 2: What Are the Various Types of Telemedicine, and How Do We Use Them?

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In response to demand from a wide range of stakeholders, healthcare providers are increasingly incorporating some form of telehealth into their service offerings and overall strategy. Over half of all U.S hospitals provide some form of telemedicine.¹ Urban providers are embracing telehealth and telemedicine as a method of reaching more patients, while rural providers can leverage telehealth and telemedicine to access needed providers who otherwise cannot be available locally. Here are a few examples of what we've seen our clients do:

- A medical center client in a hard-to-recruit-to area supplements their local complement of physicians by providing virtual consults with infectious disease physicians.
- A rural hospital client is more efficient in its emergency department by utilizing tele-stroke and tele-psych assessments.
- An urban dermatology group reaches more patients by providing online appointments with providers.

Telemedicine programs can be grouped into three broad usage categories:

- 1) Networked programs
- 2) Point to point connections
- 3) Monitoring center links

Network programs work to link remote health clinics to larger health facilities and are usually run through high-speed internet lines. Currently, there are over 200 functioning telemedicine networked programs in the U.S that help link 3,000 rural sites.²

Point to point connections work on a smaller level. Like networked programs, they connect small remote health centers to their larger central health facility through high-speed internet, but they are typically used to help link smaller more remote clinics to specialists at other locations. Point to point connections are more commonly used within urgent care and also for teleradiology and telepsychiatry.³ Finally, **monitoring center telemedicine** is used for remote patient monitoring (RPM) and is one of the most common uses of telemedicine. Monitoring centers create a link between the remote monitoring facility and the patient's home. Data is then measured and transmitted between the two facilities using internet connections, SMS or telephone connections.³ These centers are commonly used to monitor cardiac, pulmonary, or other severe chronic conditions such as diabetes. In the U.S. alone, nearly one million cardiac patients are using remote cardiac monitors.²

¹ "About Telemedicine" American Telemedicine Association. <http://www.americantelemed.org/main/about/telehealth-faqs-> Accessed July 2018.

² "The Ultimate Telemedicine Guide | What Is Telemedicine?" EVisit® Telemedicine Solution, EVisit LLC. <https://evisit.com/resources/what-is-telemedicine/>. Accessed July 2018.

Paired with the three most common ways telemedicine is used are the three electronic formats used in telemedicine: i) store-and-forward, ii) remote patient monitoring (RPM), and iii) real-time telehealth. The versatility of these telemedicine formats make them applicable across the spectrum of telehealth services. For example, store-and-forward is common in teleradiology, while RPM is becoming commonplace for chronic care management.

Store and forward telemedicine (aka asynchronous telemedicine) is the ability to forward and share patient medical data with a provider at a different location. Providers are not required to communicate at the same time, and therefore can review the information when it is convenient for them. This service has been shown to work best for inter-professional medical services, where a provider may need to connect with a specialist in a different location over a diagnosis.³ This service is becoming increasingly popular in dermatology, ophthalmology, and radiology.³

RPM tracks a patient's status over time from a distance and is the backbone of the recent growth in home health services, rising in popularity due to its use for chronic care management.

Real-time Telemedicine (aka synchronous telemedicine) requires a live interaction using audio or video communication between a provider(s) and a patient. This is a growing business platform and many physicians have formed national companies around this idea.

Understanding the usage and format options for telemedicine can help to match the right telemedicine approach with a health system's care delivery needs. Episode 3 will spell out some of the payment issues specific to each format of telemedicine described in Episode 2.

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³ "Types of Telemedicine." *Chiron Health*, Chiron Health 2017. <https://chironhealth.com/definitive-guide-to-telemedicine/about-telemedicine/types-of-telemedicine/>. Accessed July 2018.