

# **The Telehealth Revolution:**

## ***Online-Based Health Services Continue to Rapidly Reshape Healthcare***



### **Introduction**

In 2018, more than 88% of the US population is online (has access to the Internet); a percentage accounting for nearly 287 million. Today's generation is already long accustomed to performing many activities online: shopping, playing, banking, socializing, and even visiting the doctor. In 2018, as a convenient, integrated medical experience for patients of all backgrounds, telehealth continues to gain incredible traction in the healthcare industry. A growing number of physicians and other healthcare practitioners continue to open new forms of virtual communication with patients, offering services such as medical consultations, drug prescriptions, therapy, and more. With the 287+ million Internet users in the US alone, and with 64 percent of Americans reporting that they would attend appointments via video, telehealth will continue to expand across the nation and the globe. In fact, the telehealth

industry is predicted to be worth more than \$66 billion by the end of the year 2021<sup>1</sup>. It is becoming more commonplace that patients are coming to expect 24/7 access to their doctor or other online medical service, and physicians are able to monetize the remote healthcare assistance.

In 2015, 42 states proposed more than 200 pieces of legislation that addressed telehealth, and 32 states plus the District of Columbia currently have laws mandating that health plans cover telehealth services<sup>2</sup>. Today, an estimated 70 percent of employers offer - or plan to offer- telehealth services as an employee benefit.

With the acceptance of telehealth among the patient community, it's important to note, of course, that the medical community is more on board than ever as well. In the American Well 2015 Telehealth Survey, 57 percent of primary care physicians reported they are open to holding appointments with patients via video. Additionally, C2 Solutions, a national leader in driving Collaborative Solutions in employee benefits consulting, discovered that nearly 75 percent of all physician, urgent care and emergency room visits classify as unnecessary or manageable by phone or video.

## Telehealth and Telemedicine - What's the Difference?

### Let's put telemedicine in the US in perspective:

Telemedicine is positioned to explode this year with an anticipated 7 million patient users, up from just 350,000

Even though the terms telemedicine and telehealth are often used interchangeably, according to the World Health Organization (WHO), there is a distinction between the two. Telehealth uses computer-assisted telecommunications to support management, surveillance, literature and access to medical knowledge, while telemedicine uses telecommunications *solely* to diagnose and treat patients.

Telehealth encompasses a wide range of technologies and clinical and non-clinical services designed to improve patient care and the overall healthcare delivery

<sup>1</sup> <https://www.mordorintelligence.com/industry-reports/global-telemedicine-market-industry>

<sup>2</sup> <http://www.ncsl.org/research/health/state-coverage-for-telehealth-services.aspx>

system, while telemedicine applies directly to remote clinical services. Perhaps to best remember the distinction, think of telemedicine as a component of telehealth.

## **Telemedicine - How Far We've Come**

While telemedicine seems like it's a modern-day service offering, it actually has existed for much longer than several people think. Rewind to the early 1900s, when radio dominated as the newest form of communication, inspiring Radio News Magazine in 1924 to feature an illustration of a physician tending to a patient via video call with the headline, "The Radio Doctor-Maybe!" It was the first noted time the concept was publicly conceived, but the everyday reality of a doctor-patient video call would actually take place approximately 90 years later.

However, long before that, in Pennsylvania during the 1940s, radiology images traveled 24 miles between two townships via telephone in what would be the world's first example of an electronic medical record (EMR) transfer. In the 1950s, a Canadian doctor furthered the technology via a teleradiology system that was utilized in and around Montreal. As modern film technology progressed after that, so did real plans for video-based medicine, starting with the University of Nebraska who established a two-way television configuration that would transmit information to medical students throughout the campus, and five years later, connected with a state hospital to perform ongoing video consultations.

During the 1960s and 1970s, as telemedicine services became more and more popular in rural areas where physician access was limited, the Public Health Department, U.S. Health and Human Services Department and NASA started to invest both time and money for telemedicine research. Additionally, telemedicine was also first widely used by the military, with the Department of Defense utilizing the technology to provide 'cost-effective care to soldiers on and off the battlefield.'

Of these government projects, however, the Space Technology Applied to Rural Papago Advanced Health Care (STARPAHC) was one of the most successful. The project catered to both Native Americans on Arizona's Papago Reservation and astronauts in orbit with medical care access, and involved the transmission of medical information such as X-ray photographs and electrocardiographs to and from the Public Health Service hospital. It was successful projects like this that

fostered the growth of research in medical engineering across universities, medical centers and research companies. <sup>3</sup>

Fast forward to 2018, and we've come so far beyond just video consultations and remote transmissions of medical data. We can access telehealth services at the click of a button and are surrounded by telehealth devices such as wearable technology like fitness wristbands other monitoring tools that track patient data in realtime. More and more physicians are tapping into the power and efficiency of telehealth services, including mobile health tools that offer many benefits, such as the (quite possibly soon) sparing of tedious paperwork. When it comes to telehealth, and considering how far we have come already since the year 1924, there should be nothing considered too far-fetched or futuristic-fantasy-like.



We are living in an exciting time where we get to see new technologies unfolded before our eyes on a seemingly daily basis.

### **Who Benefits from Telehealth?**

Perhaps the best thing about telehealth is the range of benefits it provides to all parties involved: the individual patients, healthcare providers, healthcare facilities, health insurance providers, families, community organizations, towns and governments.

Telehealth improves:

- The way patients and families access information
- Health outcomes for patients
- Accessibility to health education and decision-making options
- Patient productivity (less time spent in waiting rooms!)
- Recruitment and retention of healthcare providers in rural/remote areas

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<sup>3</sup> <https://evisit.com/history-of-telemedicine/>

- Early diagnostic capabilities
- Administrative and communication capabilities
- Emergency triage

Telehealth reduces:

- Healthcare costs
- Travel
- Time needed off of work
- Patient wait time
- Patient anxiety
- Instances of unnecessary repeat diagnostic procedures or tests
- Interference with childcare or eldercare responsibilities
- Missed appointments and cancellations

Telehealth offers:

- Increased revenue for providers
- Economic benefits such as job creation, increased research and development investment
- New business for new and existing healthcare providers, companies and individual medical practices
- Increased national competitiveness at various levels

Telehealth is especially proving invaluable to rural communities with limited physician and specialist clinician access (roughly 20 percent of Americans).

### **Telehealth Trends of Today**

The below are just some of the hot trends regarding telehealth as it continues to shape the future of healthcare<sup>4</sup>.

1. **Power of Data:** During a telemedicine session, patient data is collected via sensors and mobile apps, which in turn helps the treating physicians to identify risk factors for certain illnesses and recommending prophylactic

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<sup>4</sup> <http://www.telemedicine.arizona.edu/blog/telemedicine-trends-watch-2018>

treatments. Big Data, a term used to describe data sets that are so large or complex that traditional data processing applications are inadequate, is playing a significant role in analyzing varying patient data, which is greatly improving telemedicine treatments.

2. **Improved Mobility and Access to the Cloud:** With 80 percent of doctors using smartphones and latest medical apps in their practices, according to a 2015 research2guidance report, experts predict that 65 percent of healthcare facility interactions will occur with mobile devices in 2018. With medical records now being stored in the cloud by healthcare facilities and insurance providers, patients are able to access their test results, appointment updates and more online on a 24/7/365 basis. This in turn, leads to #3...
3. **(Big-Time) Security:** With the plethora of patient data being collected every millisecond, data security is the most critical concern for the healthcare industry. Today, there are several techniques available that are designed to enhance data security in telemedicine. Of these techniques is a HIPAA security check on an annual basis to reduce data security risk factors, data encryption on all portable devices, and frequent penetration testing and vulnerability assessments of IT systems.
4. **Growing Investment Opportunities:** Where there is growth, there are dollars. With the rapid growth of telehealth, it's no surprise that many organizations are investing in it. Mergers and acquisitions are commonplace in the sector as collaboration between the smaller companies and larger telemedicine operators and providers is vital to widening the telemedicine market. Additionally, countries such as India and China are seeking access to telemedicine practices of the west, resulting in even more revenue opportunities in the future.
5. **Improved Healthcare Apps:** The development of personalized telemedicine apps for both physicians and patients alike continue on a daily basis, enhancing what is known as mobile Health or mHealth. mHealth facilitates convenient interactions between physicians and patients.

## **With Opportunities Come Challenges**

Even with the success of telehealth, challenges remain. A couple of the challenges facing telehealth proponents include:

- **Licensing:** This is a big challenge for specialists who seek to advance their healthcare business plan to include telehealthcare services. Each state has its own requirements for licensing and regulating healthcare providers.
- **Changing Perceptions:** It's time to integrate telemedicine into both types of healthcare - both minor and major. Proponents face needing to convince both physicians and patients that telemedicine can be used for serious medical treatments in addition to minor ailments.

## **Unlimited Possibilities in Healthcare with Telehealth**

In summary, telehealth has changed and will continue to change the way we do healthcare in the best ways possible. Telehealth is saving time, money and lives. With the rise in aging population, the massive growth of telehealth will go on and become much more prominent in the coming years. With the advancements made so far, it really is exciting to imagine where telehealth will evolve even just one year from now. In fact, soon 'telehealth' may be a term of the past as it becomes the most primary form of healthcare.

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### **Other Sources:**

<http://www.internetlivestats.com/internet-users/us/>

<http://www.ncsl.org/research/health/state-coverage-for-telehealth-services.aspx>

<https://www.usnews.com/news/healthcare-of-tomorrow/articles/2017-11-02/the-telemedicine-revolution-a-crucial-component-of-everyday-care>

<https://mhealthintelligence.com/features/the-benefits-and-challenges-of-telehealth-for-specialists>