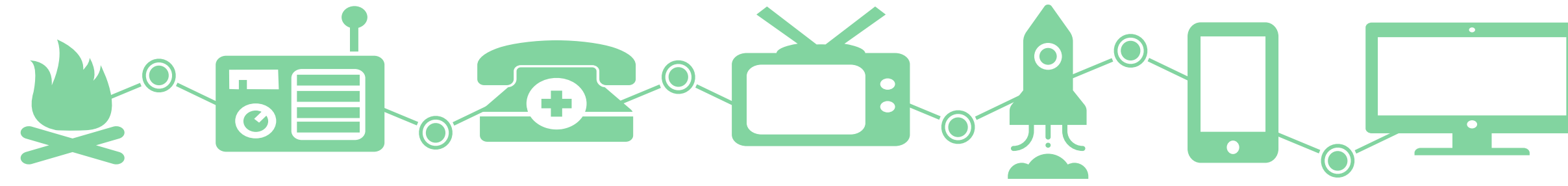


The History of Telehealth and Telemedicine



Historical recordings show the Greek and Romans used fires and light signals to send messages about the spread of plagues

500 B.C.E.

1948

The first radiological images are sent via telephone.

The telephone was shown to not only be useful for connecting households across the country, but also allowed doctors to use this new technology to send radiological images to other specialists, which helped to speed up data transfer.

1960s

Nebraska Psychiatry Institute performs psychiatric consultations with a closed-circuit TV.

The television, much like the radio and telephone, was changing the ways people send and receive information. The Nebraska Psychiatry Institute become the first to perform what is now known as a telemedicine appointment using the television. Broadcasting live, psychiatrists were able to interact with patients while they were a long distance from each other.

University and local fire services partner to provide emergency medical assistance.

1967

The University of Miami School of Medicine teamed up with the local fire department to transmit electrocardiographic rhythms over radio to Jackson Memorial Hospital in rescue situations.

1983



The Internet is Born: Computer networks establish a universal communication standard

Dr. Jay Sanders

Received a doctorate from Harvard and in 1970 went on to form the first division of general medicine in the country at the University of Miami. Served as Chief of Medicine at Jackson Memorial Hospital. In 1991 he developed the first statewide telemedicine system in the state of Georgia. Also created the first correctional telemedicine program and the first tele-homecare technology that was named "The Electronic House Call." Founder of the American Telemedicine Association and served as president for three years. Has worked as a consultant for NASA and the DOD and is currently the CEO of The Global Telemedicine Group.

2009

American Recovery and Reinvestment Act promotes and leads to greater connection online across medical technologies.

Following the recession in 2008, the government aimed to stimulate growth and economic stability with the American Recovery and Reinvestment Act. This act allocated an exuberant amount of funds into healthcare with the bill directing over \$25 billion for advancements in digital healthcare and technology for improving health. Telehealth faced the challenge of inter-technology communication between health systems and providers. The bill also helped to establish more universal and easier connectivity.

Global outbreak: COVID-19 spreading easily across borders leads to increased utilization of telehealth

2020

The COVID-19 pandemic pushes telehealth to the forefront.

Thrust to the forefront, telehealth quickly entered high demand and was forced into handling mass amounts of patients. Thankfully, decades of research helped with preparedness. The president signs multiple executive orders into effect that increased telehealth coverage by reducing barriers and restrictions to better provide care virtually to patients during the public health emergency. Bills are currently being introduced by Congress to extend and make many of these changes for telehealth permanent going forward.

The Fathers of Telemedicine

1924

Radio News Magazine depicts the future of healthcare.

Radio began to change the way communication is done and Radio News Magazine depicted the idea of a doctor attending to a patient via video call long before televisions were common and video communication was possible.



1961

NASA becomes a major pioneer in moving forward the research and development of telehealth in the 60s and 70s

1959

University of Nebraska transmits neurological examinations with telehealth.

This was the first recorded use of the telephone by healthcare workers to send medical documents back and forth with each other across the country.

U.S. space programs conduct flight tests with animals that have remote medical monitoring devices.

Space testing with animals was conducted before sending people into space, but remote sensors were still used to monitor their health and well being while leaving Earth. This led to many of the techniques and systems that are in place today.

1970s



Simpson, A., & Baldwin, C (2013). A brief history of NASA's contributions to telemedicine. Retrieved from nasa.gov.

Indian Health Services, with NASA, developed the STARPAHC project, which aimed to provide better medical care access to local Native Americans in Arizona on the Papago Reservation, and the astronauts NASA sends to space. Various forms of medical information including electrocardiographs and X-rays were sent back and forth with the Public Health Service hospital by way of microwaves. This project and many others similar in nature, designed by NASA, generated interest and sparked more research in the area of health care communication and medical engineering. This began the foundation for telehealth that would be expanded upon by numerous entities over the next several decades.

Dr. Rashid Bashshur

Received a PhD from and was a professor at the University of Michigan until 2016. Organized the first two conferences on Telemedicine and published the conferences in 1975. He was also a co-founder of the Telemedicine Journal in 1994 and served two years as president of the American Telemedicine Association at the turn of the century. He has received numerous awards and honors recognizing his work and served as senior editor on three telemedicine reports sent to congress.

Space Technology Applied to Rural Papago Advanced Health Care (STARPAHC)

1993

American Telemedicine Association is founded.

The internet up and running, potential begins to be realized by those in the healthcare field. The non-profit organization was created to promote and increase the usage of telehealth to improve the reach of healthcare to more patients and those who struggle to access it. They aim to educate both patients and providers by staying up on advances in technology and care.

2016

The Health Resources and Services Administration Receives Funding to Expand the Use of Telehealth in Rural Areas

HRSA received and distributed \$16 million to expand rural access to healthcare through the use of telehealth. It has been shown that one of the populations that benefit the most from telehealth is the rural community. Finding ways to serve the rural community and underserved communities is a driver of healthcare, and telehealth looks to fill these voids.

2010

Centers for Medicare and Medicaid Services determines what are meaningful uses of electronic health records.

After the ARRA was passed, the CMS issued a ruling on what could be considered proper and meaningful ways to use electronic health records (EHR), or electronic medical records (EMR). The reasoning was to increase and maintain the privacy of patient records in the modern era of technology. Meaningfulness was defined as "the use of certified EHR technology in a meaningful manner, such as prescribing medication and improving the quality of care."

