

Wherever the art of medicine is loved, there is also a love of humanity.

~ Hippocrates

## THE ART OF TELEMEDICINE

Telemedicine, defined as the use of technologies—including telephones—to remotely diagnose, monitor and treat patients, has actually been practiced for decades. Beginning in the 1960s when the space program began, the National Aeronautics and Space Administration (NASA) was able to chart their astronauts' vital statistics thanks to specially designed monitors attached to their spacesuits. With the advent of satellite technology, NASA also pioneered several earthbound projects that allowed them, for instance, to deliver health care to the Papago Indian Reservation in Arizona. In 1974, the agency first used high-quality videotape during a health exam conducted by a nurse but monitored by a doctor via close-circuit television. Fast forward four decades, and Telemedicine is fast becoming one of the most accurate and cost-effective ways to conduct doctor to patient evaluations. While it cannot accomplish everything that a patient may ultimately need in terms of health care, it has become a very viable alternative to in office visits, saving a patient valuable time while allowing a doctor the time to do what he or she does best - practice the art of medicine.



***The practice of Telemedicine differs from a standard office visit in that it makes innovative use of advanced technologies to communicate more directly with patients.***

Thanks to the digitization of many diagnostic devices and the increasing popularity of mobile health and tracking devices, like Fitbit, Fuel Jawbone and now Apple iWatch, anyone can keep better track of their own health and vitality. Then with Telemedicine they can reach out and share that data with their healthcare provider who can be just about anywhere.

Other applications of these modalities of remote monitoring and video conferencing allow anyone to learn about health and wellness while healthcare providers are enabled to practice preventive medicine. This is Telehealth. With Telehealth patients are educated about important healthy habits of diet, exercise, stress reduction, smoking cessation and getting restorative sleep. And with those devices all of these can now be tracked and monitored. Further there is also Telecare. Telecare refers to the use of the same tools used in Telemedicine and Telehealth to also monitor the home safety of the frail and elderly at risk for medical emergencies and hospitalization.

***Over the past few years there has been an increasing list of applications of Telemedicine:***

- Web-based consultation services providing opportunities for Urgent Care treatment of adult and pediatric age patients. Examples Include:
  - Doctors on Demand
  - HealthTap
  - MdLive
  - Teladoc
- Worksite clinics using Telemedicine kiosks
- Retail clinic kiosks in large chain pharmacies and even shopping malls
- Community and hospital-based telemedicine specialty consults for remote health clinics and for rural hospitals that have need for those specialty services not readily available such as:
  - Teledermatology
  - Tele-ICU
  - Teleneurology
  - Teleophthamology
- Government sponsored Telemedicine services in correctional facilities and for school health programs

The increasing deployment of Telemedicine in all of its forms will be a key feature for monitoring and improving the health outcomes of some of our most vulnerable populations, particularly patients with the chronic issues of diabetes, heart disease, kidney disease, and lung disease. The increasing deployment of Telehealth will also go a long way toward improving overall population health, regardless of age, sex or ethnicity.

Telemedicine has recently been embraced by many insurance companies as a way to provide care to their members while lowering costs. And companies like HealthNuvo, a Telemedicine service-support company, helps patients and doctors alike learn about the important uses of Telemedicine. By combining the innovations of a technology-enhanced medical practice with the innovative Direct Primary Care payment model, money will be saved, lives will be improved and all—patients and physicians alike—will benefit.