HOW PATIENTS MANAGED WITH DIGITAL HEALTH DURING COVID

When COVID hit the United States in 2020, more than 8 billion internet connected audio-video devices were serving as digital communication tools for people. Today more than 12 billion Internet connected devices are in use. This massive shift to digital technology helped people stay in touch with friends, relatives and colleagues during the pandemic when they were forced to be isolated from one another. Digital apps also enabled healthcare patients to become more engaged and empowered, as well as comfortable managing and monitoring their health and virtually communicating with their healthcare providers.

Prior to the pandemic, many healthcare systems had digitized patient health records (electronic medical records, EMRs) that contain health histories, family health, labs, tests, radiology images. treatments, procedures, observations, analysis from providers during an in-patient or telehealth visit and notes from hospitalizations. These digital health records form a complete profile of an individual's health and can be available whenever and wherever that individual needs to be seen at the point of care.Health portals, a digital platform enable patients to

consult their EMR so that they can review their medication lists, keep a calendar of their scheduled visits, and send communications to their health providers,

During the pandemic, these digital tools along other less familiar devices such as remote monitoring systems and wearables, telemedicine/telehealth enabled patients to get the care they needed. Remote patient monitoring systems (RPM) refer to digital devices that are placed in the home, to monitor various chronic conditions such as diabetes, hypertension, asthma, and weight. They include blood pressure cuffs, scales and peak flow meters, glucose monitors, all of which can electronically track and transmit real-time information from a patient to a provider. RPM data is typically sent to an online database that is accessed and shared between patients, physicians and health coaches. Several recent studies have documented how RPM prevented avoidable hospital readmissions and improved patients' recovery from the virus.

One study, conducted by Mayo Clinic, "Remote Patient Monitoring Provides Patients with Comprehensive Care at Home," by Karl Oestreich, June 8, 2020, documented how RPM programs prevented avoidable hospital readmissions and improved patients' recovery from the virus. Based on an analysis of results from more than 7,000 patients across 41 states, the study provedy how a two-tiered RPM program with nursing support was safe, effective and led to positive outcomes. The RPM devices located in patient rooms documented patients' vital signs several times a day and helped overworked and under-resourced hospital staff, by automating this process. Additionally, a "Hospital at Home" program enabled other patients to remain at home and ease the shortage of hospital beds by also remotely monitoring these patient's vitals. "Hospital at Home" programs have successfully been in use in many nations that have single payer systems.They are now gaining a lot of traction,in the U.S. after the CMS adopted the Acute Care at Home Model,that allows eligible hospitals with regulatory flexibilities to treat eligible patients in their homes. using wireless monitors,cloud-based platforms, and

telemedicine to enable continuous pulse oximetry, heart rate, peak flow (breathing tests).

The growth of mobile networks has also enabled the development of wearable technology, which is a category of electronic devices worn as accessories, embedded into clothing, implanted in a user's body, or even tattooed on the skin. Wearables are hands-free and equipped with microcontrollers, that detect, analyze, and transmit information through the internet without requiring human intervention. The most common wearables are smart watches, activity trackers, and smart jewelry, such as rings, wristbands, and pins that work with a smartphone app

Telemedicine and Telehealth

Telemedicine, which is the use of digital communication technology to provide and support clinical health care when distance separates the participants also became heavily used during COVID when The Centers for Medicare & Medicaid Services (CMS) broadened access to Medicare telehealth and telemedicine services under the auspices of The Coronavirus Preparedness and Response Supplemental Appropriations Act and Section 1135 waiver authority. This regulation allowed clinicians across the country (doctors, nurses, physician assistants, nurse practitioner) to be paid to furnish beneficiary telehealth services to all patients. Prior to the change in the regulations, Medicare paid clinicians for telehealth services, only in special circumstances, mainly for individuals who lived in rural areas and would have to travel great distances to a local medical facility to get needed care. There are 117 million people who live in areas where there is a severe shortage clinical care and other specialized professionals. Among patients who have a regular physician, only half, report access to same or next-day appointments, and most have difficulty getting access to care on nights, weekends, or holidays without going to an emergency room. A fifth of all adult patients report that they wait as long as six days or more to see a doctor when they are truly sick. When

the pandemic forced patients to stop seeing doctors in person, digital conversations were made possible via telemedicine.

Digital Health and COVID

During the COVID pandemic all of these examples of digital health became part of the standard of care. Patients did not want to go into medical facilities when they were sick unless it was essential. By deploying digital technologies, patients were able to remain in their homes and be cared for. However, not all citizens had equal access to healthcare or to technology as the pandemic so clearly pointed out. Severe gaps in the availability of computer systems and broadband technology limited healthcare availability and continues to do so. Basic healthcare for all citizens is far from equitably available as the pandemic so clearly demonstrated. However, because COVID made these deficiencies and inequities in our health system so obvious, there is finally public pressure to make changes. As we recover from the worst of the pandemic, this nation must address and resolve health inequity and put in the infrastructure to provide needed services at locations where our most vulnerable populations live.We need to establish community health centers close to where people reside that offer basic health services as well as facilities that can be turned into testing, and vaccination centers accessible to those who need these services.