

# Handy Gizmos, Gadgets & Apps For Nurses And At-Home Patients

KATHERINE O'BRIEN

In a time when society is being challenged by the biggest public health crisis in a century, it's nice to know that telehealth is on our side. In the last few years, a slew of apps and medical devices have been invented that can help clinicians and consumers deal with everything from heart murmurs to social anxiety.

The Telehealth's future is bright. Here's what it'll look like in 2025 article provides an eye-opening look at a (near) future that is well on its way to being transformed by medical technology. In fact, even in 2020, as this other Fast Company article points out, high-quality cameras and sensors have turned smartphones into fast, accurate and low-cost medical diagnosis devices. For instance, ResApp has created an app that uses the sound of a cough to diagnose respiratory diseases, while Healthy.io has created an app that allows clinicians to scan wounds and get measurements quickly and effectively.

There's also a range of medical devices that can be used to make telemedicine visits run more smoothly. For example, Eko's next-gen digital stethoscope, which has been approved by the Food and Drug Administration (FDA), uses an AI-powered cardiac screening platform that can help clinicians identify AFib and heart murmurs. Another device is MedWand, which is pending FDA approval. This portable diagnostic tool comes with 10 scopes and sensors, including an ophthalmoscope, an otoscope, a pulse oximeter, a stethoscope, a thermometer that doesn't require skin contact, and a throat illuminator.

Tech companies have also been busy inventing apps and devices to help healthcare professionals communicate better with patients. One such app is Canopy Speak, which offers a wide variety of translated medical terminology and phrases – helpful if you need to interact with non-English speaking residents. These days, though, nothing gets more in the way of communicating more than the now ubiquitous facial mask. Luckily, ClearMask has created the first fully transparent FDA-cleared class II surgical clear mask, allowing people to see facial expressions even when the lower half of the face is covered. (The company also makes a consumer version of this facial covering.)

Technologists have also developed some intriguing devices that can counteract the special challenges posed by the coronavirus, including the Lightstrike robot, which uses intense broad spectrum ultraviolet (UV) light to disinfect rooms and common areas. Healthy Sole, which sanitizes the soles of shoes, is another timely addition. According to CEO Nelson Patterson, when you stand on the HealthySole machine for eight seconds, UV light kills almost all disease causing pathogens on your footwear. Along similar lines, the

HoMedics UV-Clean Phone Sanitizer uses UV light to kill up to 99.9 percent of bacteria and viruses on phones, ear buds and keys.

## Helping Keep Rehab Patients at Home

Of course, tech companies have not forgotten consumers. An abundance of apps and gadgets and connected devices can help keep seniors or rehab patients convalescing at home out of the hospital. Not only can voice assistants like Google Home or Amazon Alexa automate such tasks as turning on lights or locking doors, but they can also set reminders about when to exercise or to take blood glucose readings or medications. Smart pillboxes are another medication reminder option – these devices use flashing lights or sounds and/or send text reminder messages to a smartphone.

Rehab patients and seniors can also benefit by wearing sensor-embedded clothing. Some wearables measure how people move around, detecting an unsteady gait and alerting care providers if they fall, while others identify changes in body temperature or heart rate. Moreover, some fitness trackers and smartwatches are equipped with sleep monitors and heart rate trackers as well as SpO2 sensors, which measure blood oxygen saturation.

A few other medical devices that at-home patients can use, include:

- Healthy.io's urine screening test
- One Drop's FDA-approved Bluetooth-enabled glucose meter kit and app that measures blood sugar levels and reports the data to caregivers
- The KardiaMobile6L, the only FDA-cleared device to identify AFib and abnormally high/low heart rates
- The Current, an FDA-cleared wireless device that measures the pulse, respiration, oxygen saturation, temperature and mobility of patients, providing physicians with real-time updates

Many apps and digital programs focus on emotional well-being as opposed to physical health, including well-known meditation apps like Calm or Headspace. One of the more interesting virtual offerings is Pets Together, a free program launched by Animal Farm Foundation to help combat the social isolation associated with the pandemic. Pets Together allows house-bound people to enjoy real-time visits with dogs, cats, goats, horses, and other critters as well as the people who care for them.

There's no pat answer to the coronavirus pandemic, but telehealth is making it easier for patients and healthcare professionals to cope in this rapidly changing environment. 🐾

