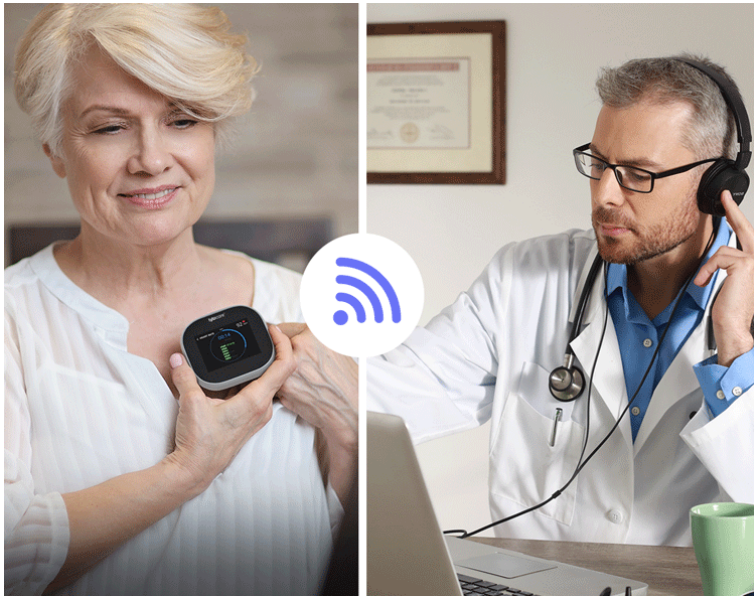


UHealth Televigilance: Innovative Remote Monitoring to Safely Discharge Specific COVID-19 Patients with Home Monitoring

The University of Miami Health System has launched the UHealth Televigilance program, allowing providers to remotely monitor and care for COVID-19 patients who might otherwise need to continue care in inpatient settings.

The program involves arming discharged patients with TytoCare home health devices, which they and their caregivers use to electronically transmit timely health status information. Providers monitor patients' vital signs and can quickly address problems or triage patients who need higher levels of care.



A physician monitors a patient with the TytoCare device.

"The UHealth Televigilance program intends to decrease length of hospital stay and prevent readmissions while freeing up hospital beds," said Sabrina Taldone, M.D., M.B.A., medical director of the UHealth Televigilance program and associate program director of the Internal Medicine Residency Program at the Miller School of Medicine. "Merging the benefits of telemedicine visits with the clinical accuracy obtained through recording patient vital signs and an extensive physical examination enhances the opportunity to closely monitor specific patients immediately after hospital discharge or ER release, thereby improving transitions of care."

The device regularly monitors patients' temperature, blood pressure, heart rate, and oxygen saturation. If providers see data that concerns them, they can follow up with a telemedicine visit and conduct a thorough examination. The patient or caregiver uses device adapters to allow Dr. Taldone and other providers to examine the patient's heart, lungs,

skin, mouth, and ears.

The TytoCare device is integrated with Epic, UHealth's Electronic Medical Record system. This allows UHealth to apply computer logic to patients' clinical data, which also helps to alert providers when a value is out of normal range, according to David W. Reis, Ph.D., chief information officer at the University of Miami Health System.

"It brings another layer of data review and analysis for the patient, and makes it easier for our clinicians to rapidly respond when they see something that looks out of range," Dr. Reis said.

UHealth began distributing the TytoCare devices to eligible patients on July 10. The plan is to distribute seven to 10 of the devices a week.

"Thus far, these devices have been given to the COVID-19 patients at higher risk of complications, such as those with co-morbidities or those discharged on home oxygen," Dr. Taldone said.

A candidate for the technology might be a patient in the UHealth emergency department with COVID-19 pneumonia, who isn't necessarily sick enough to be admitted to the hospital but would do well with a provider following up and making sure that the patient isn't getting worse. Inpatients who are eligible for the program include those who have been hospitalized for a significant length of time and need close follow-up after discharge.

Miami resident Tomas Camacho and his son Thomas, who is caring for the elder Camacho, are using the TytoCare device.

Tomas Camacho was discharged from UHealth Tower with oxygen, after staying several days in the hospital with COVID-19 pneumonia. His son recalls feeling stressed when his 73-year-old father came home because he wasn't sure how to monitor his progress.

"The [TytoCare] device has been amazing because we've been able to send all the information directly to the doctor, and she has contacted us and been very helpful in everything. It gives you a little ease," Thomas Camacho said. "It's pretty simple to use."

Receiving vitals data from the device helped Dr. Taldone to intervene and prevent a readmission when the patient's blood pressure dropped precipitously and his oxygen saturation was low. "After reviewing records from his hospitalization in the electronic medical record, I initiated a telemedicine visit with the patient and his son," she said. "Importantly, our visit revealed the patient had re-started his home medications for hypertension. After adjusting his medications, his blood pressure improved.

"By seeing the patient, I noticed the nasal cannula was not properly placed on his face. They also needed education on how to appropriately titrate his home oxygen. Therefore, we were able to help the patient avoid a call to 911 and a hospital readmission."

Patients or caregivers need to have access to a smartphone or tablet and a Wi-Fi network. Once they're trained in how to use the device, patients or caregivers need to be able to perform vitals measurements using the technology.

"As we gain a better understanding of the UHealth Televigilance program's full potential, we hope to improve patient transitions of care and to provide a higher quality of patient care at lower cost," said Dr. Taldone.