WSJ PRO

This copy is for your personal, non-commercial use only. To order presentation-ready copies for distribution to your colleagues, clients or customers visit https://www.djreprints.com.

https://www.wsj.com/articles/hospitals-tap-ai-to-help-manage-coronavirus-outbreak-11584696601

Hospitals Tap AI to Help Manage Coronavirus Outbreak

Health-care providers are enlisting the technology to monitor patients, screen visitors

Tampa General Hospital is installing an AI system designed to detect feverish visitors by scanning their faces.

PHOTO: TAMPA GENERAL HOSPITAL

By Jared Council

March 20, 2020 5:30 am ET | WSJ PRO

Large health-care systems are turning to artificial intelligence to monitor patients and to regulate the flow of visitors as they attempt to contain the spread of the novel coronavirus.

Tampa General Hospital in Florida this week is installing a new AI system designed to detect feverish visitors with a simple facial scan. Meanwhile, Sheba Medical Center in Ramat Gan, Israel, has equipped two remote hospital units it established to treat Covid-19 patients with AI-powered monitoring equipment.

Both hospital systems are embracing new AI technologies to help combat the coronavirus outbreak. Still, AI technologies installed before the pandemic are likely to be the most effective, said Gregg Pessin, a senior director analyst in Gartner Inc.'s health-care provider research arm.

"The [AI technologies] that have proven themselves with other infectious diseases, we can have higher expectations of them," Mr. Pessin said.

MORE FROM WSJ PRO AI

- AI Tool Can Spot Possible Coronavirus Cases Before a Test
- What Does the Covid-19 Economy Look Like? Chicken Prices Might Hold a Clue.
- Startup Uses Machine Learning to Find Coronavirus Therapies

Sheba, which serves about 1.6 million patients a year, has seen 40 patients with Covid-19, about five of whom have been discharged. It expects to treat more cases.

In the past few weeks, Sheba converted one of its staff dormitories into a 40-bed specialty unit for Covid-19 patients with mild symptoms and turned part of an underground parking garage into an 40-bed intensive-care unit for Covid-19 patients with severe symptoms.

With those patients isolated from staff, Sheba has been employing artificial intelligence to help closely monitor them. One such technology is an AI-powered sensor developed by Israeli medical-devices company EarlySense Ltd. that can predict which Covid-19 patients are likely to experience complications such as respiratory failure or sepsis within the following six to eight hours.

That sensor, which sits under a patient's mattress, works by using machine learning to filter and analyze patterns in a person's heart activity, respiratory rate and body movement and send early-warning alerts to medical staff members about deteriorating conditions.

Eyal Zimlichman, chief medical officer and chief innovation officer of Sheba Medical Center in Israel.

PHOTO: SHEBA MEDICAL CENTER

An early sense of how many patients are deteriorating can help the hospital better allocate scarce resources, such as beds in its intensive-care unit, said Eyal Zimlichman, Sheba's chief medical officer and chief innovation officer.

"As things get more busy—and we know they'll get more busy—we're going to need every bed that we have," Dr. Zimlichman said. The hospital's epidemiology unit projects that as much as half of Israel's population, or more than four million people, might contract Covid-19.

Tampa General Hospital, which has more than a half-million visitors annually, has admitted three patients with Covid-19 and also is bracing for an influx.

As part of an effort to curb the spread of any disease in its public gathering areas, the hospital this week is introducing an AI-powered screening system developed by Orlando-based Care.ai Inc. The system—which uses camera-embedded devices stationed at the hospital's six available visitor entrances—assesses a person's health by analyzing facial attributes such as sweating and discoloration as well as data from a thermal scan.

The objective is to screen visitors for fever and block those who are feverish, said John Couris, president and chief executive of Tampa General Hospital. Visitors are also screened based on questions about international travel and contact with people infected with Covid-19, whether they are feverish or not. People seeking hospital admission are directed to emergency-room entrances and are triaged with traditional methods.

Mr. Couris said the Care.ai system is part of an outbreak-response plan to reduce normal foot traffic at Tampa General by three-quarters, and that it "keeps people that don't really need to be in the hospital, out of the hospital."

Write to Jared Council at jared.council@wsj.com

Copyright 2020 Dow Jones & Company, Inc. All Rights Reserved

This copy is for your personal, non-commercial use only. Distribution and use of this material are governed by our Subscriber Agreement and by copyright law. For non-personal use or to order multiple copies, please contact Dow Jones Reprints at 1-800-843-0008 or visit www.djreprints.com.