

## Retired doctor says his mobile phone app is 'perfect' for tracking coronavirus

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Credit: CC0 Public Domain

A retired doctor says a mobile phone app he created a few years ago can help patients avoid going to doctor's offices so they don't catch—or spread—the new coronavirus.

Dr. Hillel Kashtan, who retired as an anesthesiologist at Riverside



Regional Medical Center in Newport News, Va., nine years ago, created the application—MDHealthtrak—in 2017 to track all manner of illnesses.

In early March, he added the novel <u>coronavirus</u> to about 275 other diseases and health conditions the app can monitor.

"It's perfect for the coronavirus," he said.

Not only is it now monitoring symptoms of the virus, he said, but using the app for other ailments—from Parkinson's disease to lung and heart conditions—can cut down on person-to-person contact that's such a concern these days.

"This reduces the risk of the coronavirus for both the patient and the physician," Kashtan said.

"The physician can assess the patient with the patient at home, so the physician is protected," he said. "And the patient does not have to go sit in a doctor's office and be exposed to other patients with infectious disease."

"I'm getting about 25 downloads a day," he said last week, up from about 10 a day before the pandemic.

The app creates charts for all kinds of symptoms, tracking how those symptoms change over time. That information can then be sent to doctors to allow them to easily see the changes.

It's all part of a growing trend toward telemedicine—to include video and <u>phone call</u> "visits" as well as remote monitoring for some patients—driven in part by COVID-19 and the push to reduce patient-to-patient contact.



"Anything you can do in a physician's office—except for a physical examination—can be done remotely through a computer," Kashtan said.

The 62-year-old Poquoson, Va., resident grew up in Montreal and attended universities in Canada for undergraduate, medical school and his anesthesiology residency.

After a fellowship in Seattle, he taught anesthesiology at Wake Forest University in North Carolina for five years before coming to Riverside 1993. He retired in 2011.

Kashtan came up with the idea for the app several years ago after realizing how much time he was spending going back and forth to his doctor's offices for routine—but frequent—visits for his Parkinson's disease.

"I'd have to get in my car, drive to the doctor's office, find a parking spot, then sit in the office for 45 minutes to an hour," Kashtan said. "Then I'd get to see the doctor for five minutes, and he would say everything was fine."

One recent study, he said, shows that the average doctor's visit takes two hours out of one's day and costs them \$75 out of pocket. And don't forget the gas money for the back and forth.

MDHealthtrak allows users to keep track of their own symptoms, with no doctor involvement at all. But the app, Kashtan says, is designed with a patient-doctor relationship fully in mind.

It's particularly useful, he says, for patients who need regular monitoring after being diagnosed with a chronic condition.

It can take the data as often as a user wants, and then creates graphs



based on those inputs. Those charts can then be analyzed, and used to make changes to treatment.

"After I built it, I realized it that once you quantify the symptoms, and graph them, you get an amazing picture of the interrelationship between symptoms, treatments and the progression of the disease," Kashtan said.

For the new coronavirus, MDHealthtrak asks users to rank symptoms on a 10-point scale, from least to most severe.

That includes cough, shortness of breath, sore throat and several more. Users enter their temperature, up to 105 degrees, plus an overall take on how they are feeling.

Though no doctors are so far using the app to track patients, MDHealthTrak also has downloadable web portal for doctors to monitor the patients and their symptoms.

"The doctor can decide whether you need more or less medication, or whether you need to go to the hospital or stay home," Kashtan said.

Kashtan, for example, used the app early on to track his Parkinson's symptoms.

"I'd wake up in the morning and take a pill, then I'd test myself," he said.
"I'd exercise and test myself. I'd stretch, and then test myself. I did that throughout the whole day."

He said he quickly saw patterns emerge: The spikes and dips on the resulting charts, he said, led him to change his medication doses "to smooth out the ups and downs."

As a former doctor, Kashtan also thought about how the physicians



would be paid for analyzing a patient's symptoms through the app.

MDHealthtrak, he said, allows doctors to determine their own rates. "Their overhead is reduced, and by saving time, they can see more patients," he said.

The patient can benefit, too, he said. "If it's less than the co-pay and the value of two hours of your time, you come out ahead," he said.

Over the past year, Kashtan has marketed the app to hospitals as a way to help people with pacemakers track their symptoms.

He hasn't yet gotten any local hospitals to sign on with the new system for their doctors, but says he has a verbal agreement with a mid-sized hospital in India to use the application.

A spokesman at Riverside Regional Medical Center, Peter Glagola, said that the hospital organization knows about Kashtan's work on MDHealthtrak.

"Riverside has monitored Dr. Kashtan's progress with his app with interest for several years," Glagola wrote in an email. "Our medical informatics physicians have discussed with him the importance of integration with our electronic medical record, Epic, to facilitate efficient data flow, continuity of care, and patient communication and engagement."

Glagola said Riverside is expanding Epic and its patient portal app, Riverside MyChart, calling them the "gold standard."

Riverside is monitoring high risk patients remotely for certain conditions, he said, and is measuring symptoms, vital signs and fitness. That includes weight and breathing for congestive heart disease patients,



blood pressure for those with hypertension, blood sugar for diabetics, and air flow rates for those with asthma.

"We applaud Dr. Kashtan's efforts and encourage him to pursue integration with the major electronic medical records companies," Glagola wrote.

Kashtan called Gov. Ralph Northam's office Richmond on March 20 to tout the app's usefulness in light of the coronavirus, thinking the governor could encourage use of the app. He also called governor's offices in New York, New Jersey and Louisiana.

Northam's office referred him to a generic information page for the public, he said, and the other three offices didn't call him back. A spokeswoman for Northam, Alena Yarmosky, did not return a phone call or email from the Daily Press.

Kashtan called U.S. Rep. Robert C. Scott, D-Va., with one of the lawmaker's staffers forwarding the information to the U.S. Department of Health and Human Services. That agency forwarded to the Federal Emergency Management Agency, which has not gotten in touch.

The voice mailbox at FEMA's press office, in Washington, D.C., was full last week, and the agency didn't return an email from the Daily Press.

"I know they're busy, but I don't think they realize what we have," Kashtan said. "This is changing the way we do medicine today."

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