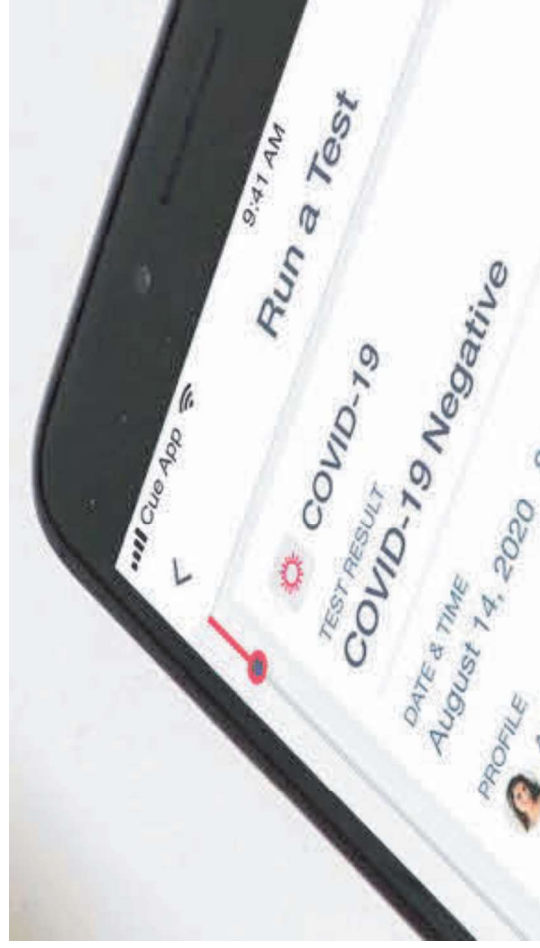


HEALTH & WELLNESS

Can You Get a Covid Test at Home?

Some two dozen companies are working on tests that let you sample and process results at home, including some that connect to your smartphone. But widespread use is still likely months away.



By Brianna Abbott

When an at-home Covid-19 test finally arrives at your doorstep, you may need to unlock the results on your smartphone. As diagnostic companies move to bring Covid-19 tests into people's homes, some developers are planning to pair the tests with digital tools and smartphone apps. The tools will be able to walk the user through the testing process or in some cases report results directly to health authorities, among other features. "We have to make this so easy that you can't help but do the right thing," said Thomas Grygs, co-director of microbiology at the Mayo Clinic in Arizona. He is working with health-care technology company Safe Health Systems, which has designed a digital platform to aid in at-home testing. "Like a lot of processes, the least reliable part is the human," Dr. Grygs said. Covid-19 tests that can provide faster, cheaper results are becoming more common in settings such as nursing homes, schools and doctor's offices. Mailable test kits also allow

people to collect their own samples at home and ship them off to be processed in labs. Yet Covid-19 tests that can be performed and processed entirely at home are still likely weeks or months away. The FDA authorized the first such at-home Covid-19 test from Lucira Health in November, but the test won't be available nationally until the spring and requires a doctor's prescription, the company said. A handful of other at-home test-makers have submitted their tests for authorization, but Lucira's is the only at-home test cleared by the agency so far.

For months, doctors and public health authorities have been calling for tests that quickly and easily diagnose patients from anywhere. Some are pushing to deploy the tests for screening people without symptoms to reduce silent transmission, as Covid-19 continues to surge across the U.S.

Around two dozen companies are still racing to bring Covid-19 testing into homes. Some, like Lucira's test, search for the virus's genetic material, while others hunt for the virus's proteins. For many of the tests, a person would use a short nasal swab to collect their own sample and insert it into a box-like analyzer or cartridge, waiting up to 30 minutes for a result. The basic technologies to analyze the samples have already been put to use in the rapid tests deployed in doctors' offices and nursing homes. In order to market a test for at-home use, test-makers must pass the FDA's bar for authorization. The agency says the tests should be easy enough for a lay person to use and interpret at home. User mistakes could lead to inaccurate results, and the tests already won't be as precise as those run in a lab. The FDA also recommends that test-makers have a plan for reporting results, so health authorities can respond to positive cases and keep track of where the virus is spreading. "If you don't have information on the positive and negative tests being done, you don't know how much transmission is happening until you have people showing up at the hospital and dying," said Julie Swann, head of North Carolina State University's industrial and systems engineering department. "And at that point, it's too late." Federal officials are taking steps to encourage better data capture for tests done outside of the lab. On Nov. 16, the FDA and Department of Health and Human Services launched a weekslong competition for designers to submit digital health tools to help enable data capture and reporting from "at-anywhere" Covid-19 tests. Companies working on such software platforms say that they will be secure and adhere to medical privacy regulations. Privacy is likely to be a concern for some people, public health experts say. Such skepticism has in part slowed the adoption of contact-tracing apps. "There's a whole huge section of this country that doesn't want to be connected," said Michael Mina, an epidemiologist and immunologist at the Harvard T.H. Chan School of Public Health. He argues that cheap, low-tech paper-strip tests should be deployed for home testing. This technology exists but isn't authorized for home use. More in Health and Wellness Exposed to Covid-19 During the Holidays? Here Are Safe Tests and Practices

What Are the Health Risks of Disinfectants?

The Fitness and Wellness Industry's Latest Advice: Give Yourself a Break

Most companies working on mobile apps have developed features to show people how to set up the test or collect a sample. Cue Health has “invested a lot in instructional videos,” said chief executive Ayub Khattak. The device, which has already been deployed in nursing homes and the National Basketball Association bubble, connects to the company’s mobile app via Bluetooth. It isn’t currently authorized for at-home use and it’s not clear when that might happen. Gauss Surgical, a health care AI company, has partnered with biotechnology company Cellex on an at-home Covid-19 test that would require a smartphone. They have submitted their test for FDA review. A user would snap a photo of the colored lines that appear on the testing device with their smartphone. An algorithm would help the user interpret the result. Lucira Health’s test isn’t digital, but the FDA is requiring the company to either design a mobile app or a website within four months to enable better reporting to public health authorities. An at-home test from digital diagnostics company Ellume would transmit the results from the testing device to a person’s phone via Bluetooth as well. The results couldn’t be accessed without a smartphone. The company has applied to the FDA for at-home use authorization. “You need to make a test simple enough for someone who is not feeling well to get it right the first time, and maybe they’re not reading well, and they’re stressed and anxious,” said Sean Parsons, Ellume’s founder and chief executive. A handful of platforms, including Ellume’s, are hoping to offer a telehealth option that would let users link to a health-care provider to get help interpreting test results or seeking medical care. The data from Ellume’s test would automatically transmit to health authorities by sending the data through an outside provider already connected into the public health system, Dr. Parsons said. Some test-makers such as Quidel already have data systems connected to their available tests and are planning to expand them. Quidel is currently working on software “to facilitate telehealth and at-home testing,” chief executive officer and president Douglas Bryant said in a statement. Write to Brianna Abbott at brianna.abbott@wsj.com