Medical Xpress

Another rapid COVID-19 test shows promise

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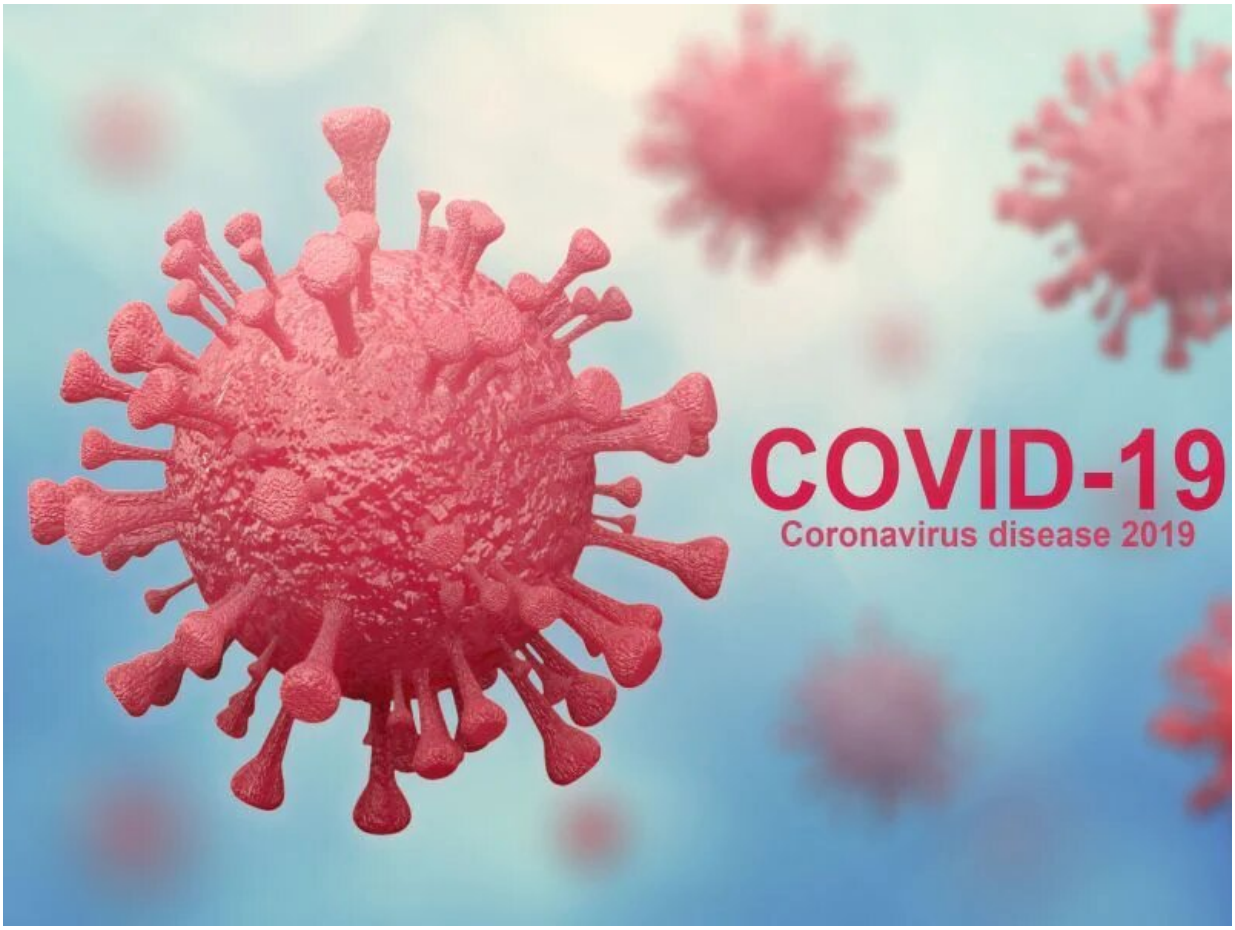

(HealthDay)—Yet another rapid COVID-19 test has proven its mettle in spotting infection with the new coronavirus, this time in a British study.

The lab-in-a-cartridge testing device—which can be performed at bedside, doesn't require a laboratory, and can be performed in cartridges smaller than a mobile phone—was tested on 386 National Health Service staff and patients in Britain.

The test had 94% sensitivity and 100% specificity, meaning it had a high level of accuracy and produced very few false negatives and no false positives. The results are available within 90 minutes, while conventional COVID-19 tests provide results within 24 hours, the researchers said. The findings were published Sept. 17 in *The Lancet Microbe* journal.

In the United States, four rapid coronavirus tests have already been developed. These tests detect COVID-19 antigens, proteins found on the surface of the coronavirus, rather than the virus itself, according to the *Associated Press*. It's considered a faster, but less precise, screening method.

One of these tests, made by Abbott Laboratories and called BinaxNOW, has already secured a $760 million deal with the White House to produce 150 million rapid nasal swab tests for community testing, according to the *AP*.

The 15-minute BinaxNOW test will sell for $5, giving it an edge over similar tests that need to be popped into a small machine, the *AP* reported. No larger than a credit card, the Abbott test is based on the same technology used to test for the flu, strep throat and other infections.

"Those [rapid] screening tests are what we need in schools, workplaces and nursing homes in order to catch asymptomatic spreaders," Dr. Jonathan Quick, an adjunct professor of global health at Duke University in North Carolina, told the *AP*.

With the British test, a nose swab from a patient is inserted into the cartridge device, which analyzes the sample for genetic material belonging to SARS-CoV-2 virus.

The new test is being used at eight London hospitals, and is due to be rolled out at a national level. The U.K. government recently placed an order for 5.8 million of the testing kits.

"These results suggest the test, which can be performed at a patient's bedside without the need to handle any sample material, has comparable accuracy to standard laboratory testing," said study author Graham Cooke. He is a professor in the department of infectious disease at Imperial College London.

"Many tests involve a trade-off between speed and accuracy, but this test manages to achieve both," Cooke said in a college news release.

The test—made by DnaNudge, an Imperial College London start-up—is now being developed to simultaneously check for COVID-19, influenza and respiratory syncytial virus, the researchers added.

Chris Toumazou is CEO and co-founder of DnaNudge and founder of the Institute of Biomedical Engineering at Imperial College London. He said, "The DnaNudge test was developed as a lab-free, on-the-spot consumer service that can be delivered at scale, so we clearly believe it offers very significant potential in terms of mass population testing during the COVID-19 pandemic."

More information: The U.S. Centers for Disease Control and Prevention has more on COVID-19 testing.