

BUSINESS

Rapid COVID testing could 'nip any emerging outbreak immediately,' experts say





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A medical professional asks an initial screening question to a driver in line for drive-thru COVID-19 testing, Thursday, March 19, 2020, at the United Memorial Medical Center in Houston.

Mark Mulligan, Houston Chronicle / Staff photographer

New COVID-19 tests that can produce results in as little as 15 minutes are expected to become available in the United States as soon as this month, a development that would help could help companies bring workers back to the office and schools bring students into the classroom safely, doctors said.

The rapid tests manufactured by medical device companies such as Abbott Labs show promise for accurate, widespread testing, according to researchers at Baylor College of Medicine and Texas A&M. The federal government, which bought the first 150 million tests produced by Abbott, plan to distribute it to states in hope of reopening schools, allowing visitors back to nursing home and making it safer for employees in the workplace.

Houston's medical offices and labs would be able to process the rapid tests, which cost as little as \$5.

"Where this is going to be extremely helpful are congregant settings where we can test people very often," said Chris Amos, director of the Institute for Clinical and Translational Research at Baylor College of Medicine. "Then we could nip any emerging outbreak immediately."

How it works

It's unclear when the tests might become available in Texas. Neither the U.S. Department of Health and Human Services nor Texas Department of Emergency Management responded to requests for comment.

The U.S. Food and Drug Administration approved Abbott Labs' BinaxNOW COVID-19 test for emergency use in late August. It consists of a nasal swab that does not need to touch the upper throat.

Abbott Labs will also offer a mobile app to check results. If a person tests negative, Abbott will create a digital "pass" as a clean bill of health. Workplaces and schools can set an expiration date for each pass and require people to get retested.

If a person tests positive, they're told to quarantine and talk to their doctor in a message sent through the app.

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The appeal is twofold. Any doctor, school nurse or occupational health specialist can be trained to take samples. And labs don't need as much expensive equipment and supplies to run the tests, said Jeffrey Cirillo, a Texas A&M Health Science Center professor of microbial pathogenesis and immunology.

"It's got a lot of potential," Cirillo said, "for making things more rapid and simple for less technically skilled labs, where they maybe don't have a highly skilled diagnostician, but somebody who could just follow instructions."

Abbott's rapid tests are antigen tests, meaning they look for pieces of proteins that make up the virus, said Joseph Petrosino, director of Baylor College of Medicine's Alkek Center for Metagenomics and Microbiome Research.

They're not as sensitive as molecular tests, the so-called "gold standard" tests, that require medical professionals to take the swab samples and take longer to process but produce more accurate results.

Antigen tests run a higher chance of a false negative than the molecular tests, but the frequency with which the tests can be administered provides a level of protection, Petrosino said. In addition, the antigen tests can be followed up with molecular tests if patients with negative results exhibit symptoms.

"The key to the efficacy of these tests is that you're taking it more than once, so the statistics work in your favor," Petrosino said. "If you're symptomatic and test negative, they tell you to follow up with the gold-standard tests."

Who pays, who gets it

Abbott Labs, which said it would manufacture and ship 50 million tests a month by October, is charging \$5. That's not the final billing price for patients, but even after the costs of labor and personal protective equipment, the rapid antigen tests would still cost less than the \$40 to \$70 base cost for the molecular tests.

Other rapid tests are also making their ways onto the market. A 15-minute COVID-19 diagnostic test produced by medical technology company <u>Becton Dickinson and Co.</u> was approved by the European Union at the end of September. A molecular rapid test manufactured by a Sugar Land company, DetectaChem, was recently cleared by the FDA for emergency use.

The U.S. Department of Health and Human Services said it purchased the kits from

Abbott to distribute to states to streamline the process and avoid having state governments compete for the available stocks, as they did for ventilators and other equipment early in the pandemic.

Hospitals and workplaces can't purchase the tests yet. Local hospitals have inquired about buying tests, but, Amos said, they've been told it could be a three month wait.

"What we hear is that the government bought up the supplies and that is appropriate, actually," he said. "But it'd be helpful to know what the government's plans are for the use."

What could go wrong

Companies in the Houston area aren't confident that the rapid tests will arrive anytime soon. Employers who are testing workers rely on molecular tests that take a day or more to turn around, said Chris Skisak, executive director of the Houston Business Coalition on Health, a nonprofit representing employers who purchase health insurance plans.

Even though scientists say that the rapid tests are good, employers are still skeptical that they'll detect every COVID-19 case and prevent breakouts. The rapid tests approved earlier in the year — and in May, <u>used by the White House</u> to screen employees — had high rates of false negatives, with as many as half of tests missing infections.

"Few are doing rapid testing because concerns about accuracy are just as great as how quickly they can get results," Skisak said.

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Abbott says its tests are highly accurate, but not a complete replacement for the molecular tests. The U.S. Department of Health and Human Services recommends that patients who test negative but have COVID-19 symptoms confirm the results with molecular tests.

"Rapid tests are just one component of good practices for returning to work or school," said, Petrosino, one of the Baylor researchers. "You still need to have social distance and wear masks for the time being as long as the virus is prevalent in the community."

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Gwendolyn Wu is the writer of The Chronicle's flagship newsletter, Bay Briefing, and an engagement reporter. As a Hearst Fellow, Gwendolyn previously worked as a business reporter at the Houston Chronicle, focusing on the health care and biotech sectors, and a metro reporter for The San Francisco Chronicle, where she was part of the award-winning breaking news team that covered the deadly Camp Fire.

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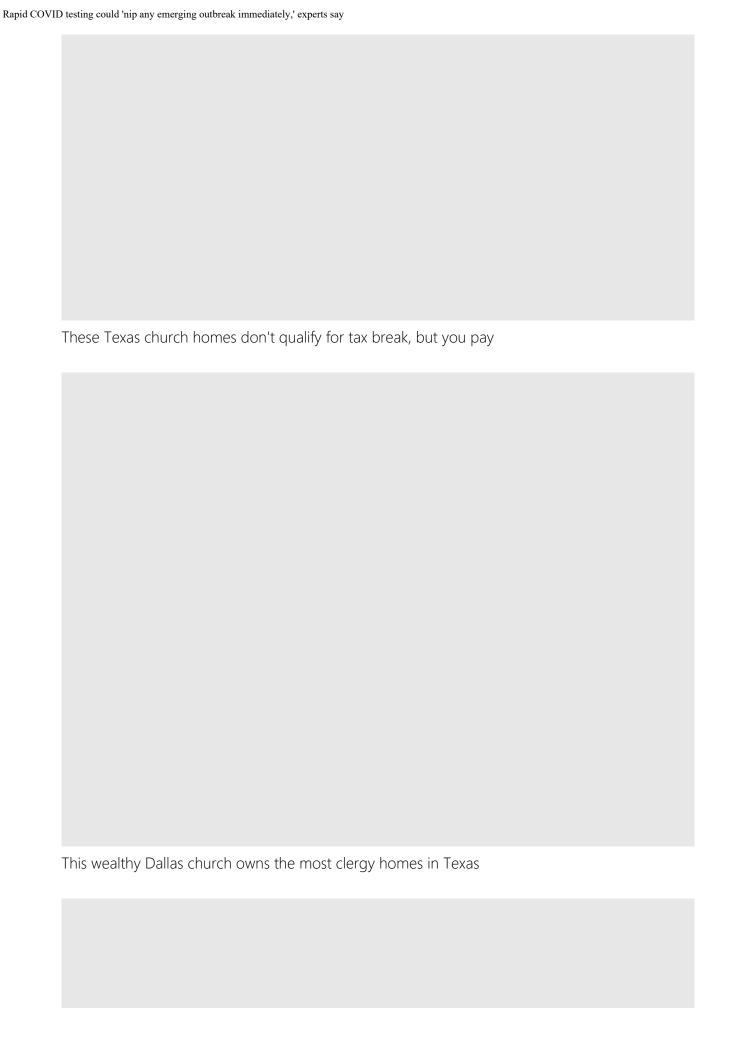
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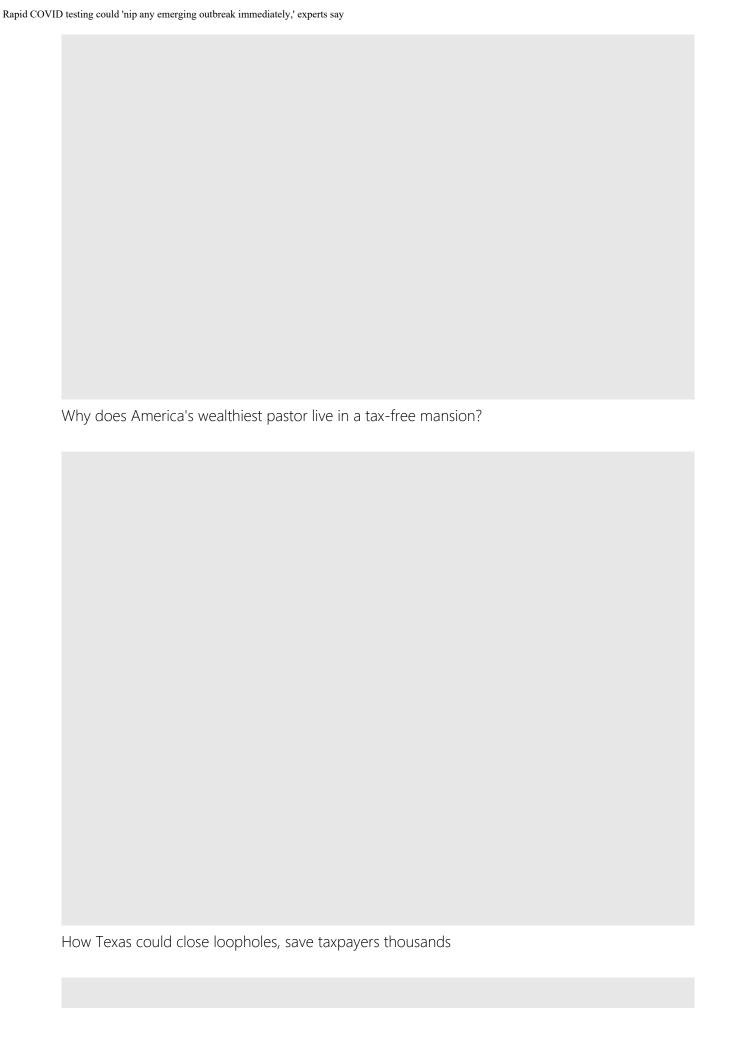
Houston rents have soared to record highs, forcing renters to downsize

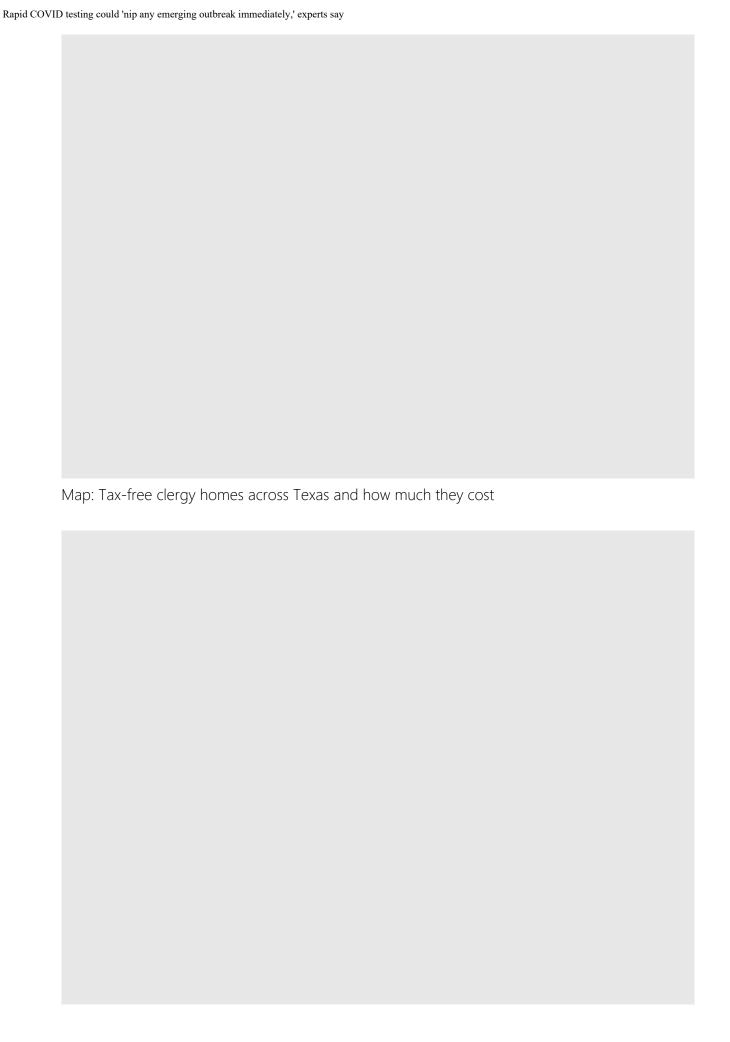
As a result, rents have spiked and investors have begun snapping up apartment complexes at historically high rates — a dynamic that economic forecasters believe will persist into next year

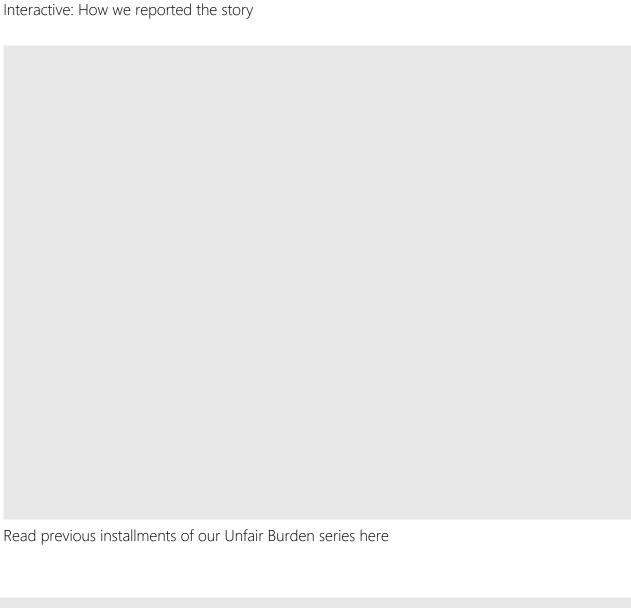
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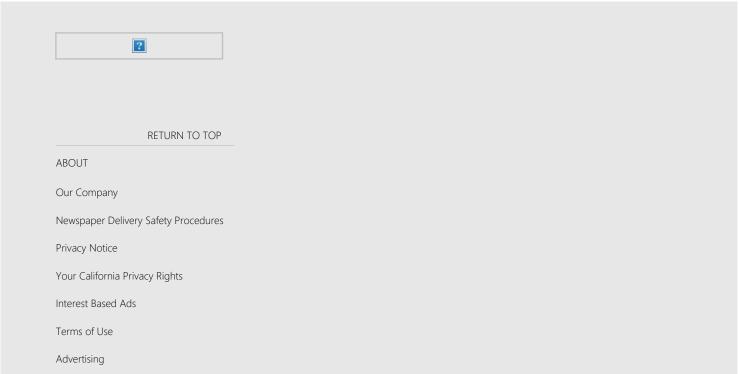
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