



Statement before the House Committee on Oversight and Reform Select Subcommittee
on the Coronavirus Crisis
Member briefing on coronavirus testing, tracing, and targeted containment: Steps to
reopen the country

Coronavirus testing, tracing, and targeted containment: Steps to reopen the country

Dr. Scott Gottlieb
Resident Fellow

May 13, 2020

The American Enterprise Institute (AEI) is a nonpartisan, nonprofit, 501(c)(3) educational organization and does not take institutional positions on any issues. The views expressed in this testimony are those of the author.

Everyone wants to know when we'll be safe from COVID-19. The answer is we're probably in for a long fight. We'll face a persistent risk, maybe until we get a vaccine, or even after. But that risk can be managed, and reduced, if we focus on helping those at the greatest threat of getting the disease.

Reliable tests for the presence of antibodies (which tell who has had the disease) will be very important. But we also need tests that reveal who is carrying the virus to find the illness in our communities and get people access to care before individual cases turn into outbreaks and outbreaks into a new epidemic. We have the technology and public-health tools to achieve these goals, and new capabilities are being quickly developed to scale faster testing.

A critical element going forward is the ability to bring accessible, dependable and affordable testing to people who have symptoms or are at risk of contracting the disease. That doesn't mean we need to screen everyone all the time. But for those who are symptomatic or were exposed to the illness—or for those people who work in professions or live in communities where there's a higher chance for spread—we need to make sure that testing is available.

We've largely relied on a technology called polymerase chain reaction (PCR), where swabs are used to collect samples, which are then scoured for the virus's genetic material. This RNA is then amplified and analyzed to reveal the presence of active virus. But the whole process takes time, and results may not be available for at least a day.

The supply chain to support these PCR platforms is also stretched, and our network of labs is close to its limit. We're conducting around 300,000 tests a day. Given constraints on logistics and supply chains, the upper limit is probably 500,000.

New technologies are becoming available that will expand testing so that it will be accessible whether you're a large employer, a patient in a community setting or a college student returning to campus.

The key will be matching the right testing solution to the right medical need. The first layer of testing is frontline solutions that offer routine screening right in a doctor's office. These include machines like the Abbott ID NOW test that the White House is currently using and that can give a result in five to 13 minutes. The Cepheid GeneXpert is a highly accurate testing system that generates results at the point of care in 30 to 45 minutes. This month, a rapid test by Quidel was authorized under emergency-use authorization by the FDA. It screens for antigens that the virus emits and gives a result in minutes.

These tests are relatively cheap, easy and fast. Their limitation is that they're highly specific, but (with the exception of the GeneXpert) they're not uniformly sensitive. That means if they say you have COVID-19, you almost certainly do. But sometimes they'll say you aren't infected when you really are. In the hands of a health provider, these point-of-care tests can help rapidly diagnose most patients. For those who get a negative test but have suggestive symptoms, the doctor can send off the PCR-based test as confirmation and wait for the result.

The next layer of testing is the PCR machines that offer more reliable results but take time to run. They'll continue to have an important role when accuracy counts.

But to enable widespread screening of mostly healthy people (think of a workplace that wants to screen its entire workforce on a regular basis) we need a third layer of tools that allow quick and accurate screening of large populations. For these tasks, you want machines that can screen many people with a high degree of precision, even if they don't have any symptoms. Consider a model where employees would spit in tubes and then the samples would be pooled together in groups of 50 or even 100 and tested overnight to see if anyone has coronavirus. If a pooled sample gets a hit, the workers could be individually screened using PCR.

I work with technologies and services that can be used for this kind of screening at the workplace. These kinds of platforms are already available, and some large employers are going to be using them to implement broad screening of their workforces.

Keeping people safe requires tests that are easy, affordable and available. We need to make sure that people who work or live in places that put them at higher risk have access to these opportunities.