

Dr. Fauci: 2021 may see up to 300 million doses of COVID-19 vaccine

JUN 4, 2020

Len Strazewski

Contributing News Writer

The wait for a COVID-19 vaccine may be over sooner than expected, thanks to accelerated late-stage human testing and a plan to manufacture doses even before the trials are complete. That's according to Anthony S. Fauci, MD, a member of the White House coronavirus task force who has served as the director of the National Institute of Allergy and Infectious Diseases since 1984.

Phase 3 testing for the first vaccine candidate from biotech company Moderna begins in July, according to the United States' leading infectious disease research administrator, with a diverse test group of about 30,000 participants in U.S and international locations. The vaccine was developed at the National Institutes of Health vaccine project.

A second phase 3 trial by AstraZeneca, whose proposed vaccine was developed in the United Kingdom, may begin shortly after or possibly simultaneously, said Dr. Fauci.

He discussed the development of COVID-19 vaccines and the potential for their rapid manufacture with *JAMA* Editor-in-Chief Howard Bauchner, MD, as part of the #JAMALive series of interviews.

Stay up to speed on the fast-moving pandemic with the AMA's COVID-19 resource center, which offers a library of the most up-to-date resources from JAMA Network™, the Centers for Disease Control and Prevention, and the World Health Organization. Also check out the JAMA Network COVID-19 resource center.

Why COVID-19 vaccine trials could move quickly

Dr. Fauci said two or three more phase 3 trials may launch in late summer, creating a pool of vaccine candidates for possible manufacture and distribution.

Usually phase 3 can take several months to yield results but one or more of the summer trials could be ready much sooner, he noted.

“If you start the phase 3 and then when you are a month or two into it, and you are in an area that you have highly vaccinated where you have a big outburst and a surge of cases, you could get your answer pretty quickly,” he said.

“I am cautiously optimistic that with the multiple candidates with different platforms, that we are going to have a vaccine that shows a degree of efficacy that will make it broadly deployable,” he said. “However, there is never a guarantee that you are going to get an effective vaccine. And I am a little concerned about the durability of the response.”

Dr. Fauci said that most vaccines developed for coronaviruses in the common cold, for example, are effective for only a year or less, while vaccines that have been developed for other infections can last 10 or more years, creating an unreasonable level of expectation.

Faster pace for COVID-19 vaccine manufacture

However, if early data from the phase 3 trials shows promise for one or more candidates, the pharmaceutical companies, in partnership with the federal government, may begin to manufacture doses for distribution in advance of final results, a process Dr. Fauci called “unique.”

This accelerated manufacturing could yield as many as a 100 million doses by end of 2020, ready for distribution if the developing data supports its use, Dr. Fauci said. By early 2021, 200–300 million does may be ready.

Other treatments may also be ready for use ahead of vaccines to provide immediate protection for elderly patients and patients with underlying medical conditions. “Very, very high priority” treatments in this category include monoclonal antibodies and convalescent plasma.

In the meantime, ahead of vaccines and tested treatments, cities and states are reopening for business and many are considering reopening schools ahead of late August or early September start. The impact of reopened cities on infection rates won’t be known for several weeks and will be complicated by the diversity of infection in the U.S., Dr. Fauci said. And the prospect of opening schools may be complicated by many factors, including the respective regional rates of infection.

“There are many, many counties in certain areas of the country where there is almost no infection at all. Under those circumstances, it is much easier to make a decision about opening the schools. If you are in an area where there is a considerable degree of active, ongoing infection, you may have to make some difficult decisions,” he said.

In such areas, schools may need to delay opening or try some “creative” variations, which could include online classes, outdoor classes or staggered schedules to create more effective spacing, Dr. Fauci advised.

Subscribe to the “Conversations with Dr. Bauchner” podcast. Each week, he interviews leading researchers and thinkers in health care about their recent *JAMA* articles. Go beyond an article recap, and delve into the background, context and implications of the study or editorial.

Learn more about Dr. Bauchner in this *AMA Moving Medicine Magazine* profile, “Digital designs for the age of evidence.”