

Antibody study suggests coronavirus may be far more widespread than previously thought

Kari Paul

A new study in [California](#) has found the number of people infected with coronavirus may be tens of times higher than previously thought.

The study from Stanford University, which was released Friday and has yet to be peer reviewed, tested samples from 3,330 people in Santa Clara county and found the virus was 50 to 85 times more common than official figures indicated.

To ease the sprawling lockdowns currently in place to stop the spread of Covid-19, health officials must first determine how many people have been infected. Large studies of the prevalence of the virus within a region could play a key role, researchers say.

“This has implications for learning how far we are in the course of the epidemic,” said Eran Bendavid, the associate professor of medicine at Stanford University who led the study. “It has implications for epidemic models that are being used to design policies and estimate what it means for our healthcare system.”

The study marks the first large-scale study of its kind in the US, researchers said. The study was conducted by identifying antibodies in healthy individuals through a finger prick test, which indicated whether they had already contracted and recovered from the virus. Volunteers for the study were recruited through Facebook ads, which researchers say were targeted to capture a representative sample of the county’s demographics and geography.

At the time of the study, Santa Clara county had 1,094 confirmed cases of Covid-19, resulting in 50 deaths. But based on the rate of participants who have antibodies, the study estimates it is likely that between 48,000 and 81,000 people had been infected in Santa Clara county by early April.

That also means coronavirus is potentially much less deadly to the overall population than initially thought. As of Tuesday, the US’s coronavirus death rate was 4.1% and Stanford researchers said their findings show a death rate of just 0.12% to 0.2%.

The study has been interpreted by some to mean we are closer to herd immunity – the concept that if enough people in a population have developed antibodies to a disease that population becomes immune – than expected. This would allow some to more quickly get back to work, a strategy [currently being deployed](#) in Sweden. But researchers behind the study said [not to jump to conclusions](#) or make policy choices until more research has been done.

The study confirms the widely-held belief that far more people than originally thought have been infected with the coronavirus, said Arthur Reingold, an epidemiology professor at UC Berkeley

who was not involved in the study, but it doesn't mean the shelter-in-place order will be lifted any time soon.

"The idea this would be a passport to going safely back to work and getting us up and running has two constraints: we do not know if antibodies protect you and for how long, and a very small percentage of the population even has antibodies," he said.

Even with the adjusted rate of infection as found by the study, only 3% of the population has coronavirus – that means 97% does not. To reach herd immunity a significant portion of the population would have to be infected and recovered from coronavirus.

It is also unclear if the study, conducted exclusively on residents of Santa Clara county, is representative of the rest of the United States, researchers said.

"It is absolutely critical that similar studies be done all around the country," said Jayanta Bhattacharya, a professor at Stanford and author on the study. "It's very clear that the virus is more prevalent in some areas than in others, and understanding the prevalence of viruses in each region is a critical step forward to making some policy."

Other large-scale sample studies are currently underway. The National Institute of Health is [testing 10,000 people](#). UC Berkeley is [going to test](#) 5,000 healthy volunteers to see if they have, or have ever had, the coronavirus.

- This story was updated on 18 April 2020 include additional information on how participants were recruited for the Stanford study

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