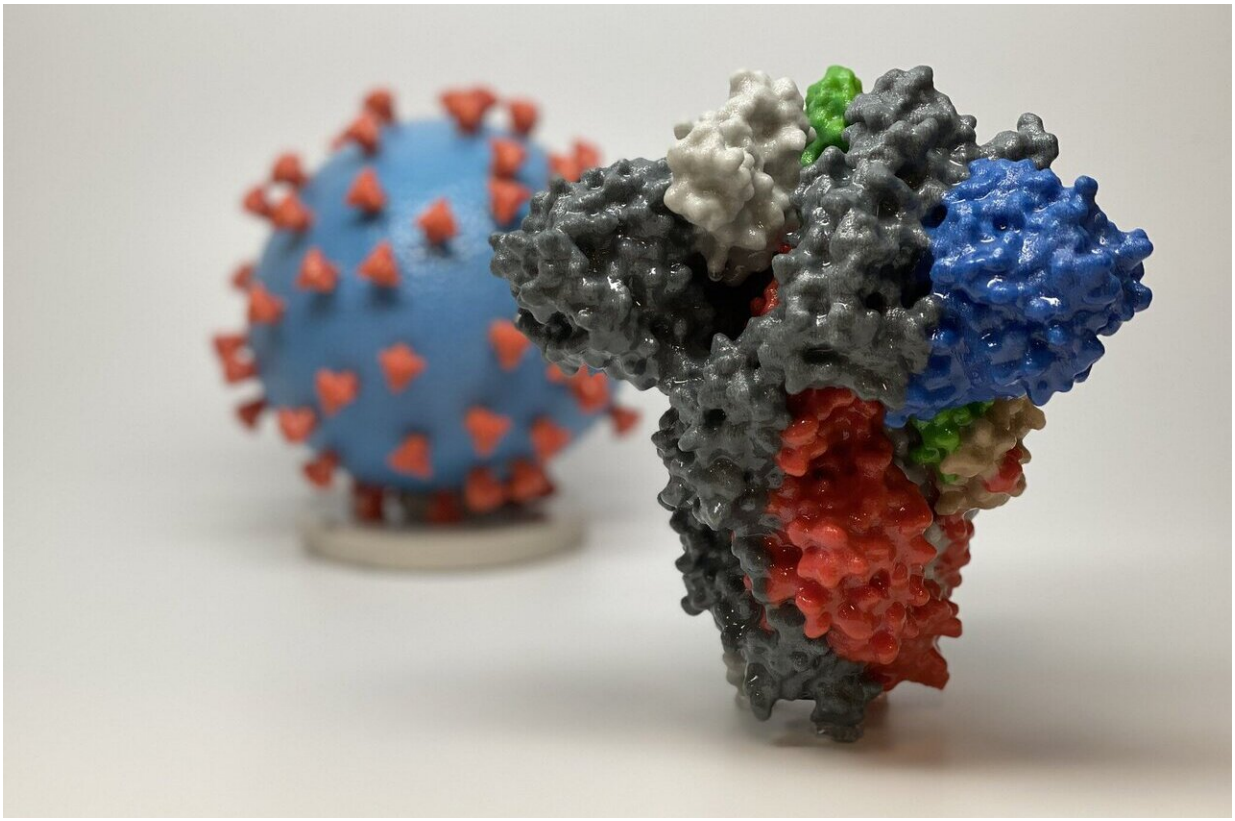
Medical Xpress

Scientists explore replacing lockdowns with weekly testing of all residents to control coronavirus spread

June 24 2020, by Bob Yirka



3D print of a spike protein of SARS-CoV-2, the virus that causes COVID-19—in front of a 3D print of a SARS-CoV-2 virus particle. The spike protein (foreground) enables the virus to enter and infect human cells. On the virus model, the virus surface (blue) is covered with spike proteins (red) that enable the virus to enter and infect human cells. Credit: NIH

A team of researchers affiliated with several institutions in the U.K. and one in the U.S. has suggested a novel way to control the spread of COVID-19—lift all restrictions in a test city and replace them with weekly testing of all residents. Those who test positive would be quarantined. In their paper published in the journal *Royal Society Open Science*, the group outlines their idea and suggests it as a way to slow or even stop the pandemic.

As the world continues to grapple with the ongoing pandemic, researchers propose various ideas to slow or stop its spread. In this new effort, the researchers are proposing that a mid-size city (population approximately 250,000) be used as a test case for a novel way to slow or stop the spread of the virus—lift all of the restrictions that are in place in the city, and instead institute a policy of weekly testing for everyone who lives or works there. If someone tests positive, they and their family would then quarantined.

The researchers insist their math shows the merits of such a strategy. They note that current research suggests that it takes approximately 6.5 days for an infected person to pass on the virus to someone else. If that person were tested and found to be infected, they could be prevented from infecting others, thus halting the spread of the disease. They also note that if one person in 2000 were infected at any one time, the city would only need to quarantine 1000 households, which they suggest could very easily be done in the real world. They further suggest such an approach could slow or even stop the spread of the disease in the test city within a matter of weeks. And if it worked as proposed in the test city, the approach could be used for a whole country.

The researchers also suggest that it should be possible to test everyone in a city on a weekly basis by using saliva-based tests (RT-Lamp) because they are not only cheaper than those in use now, but are less uncomfortable to the people being tested.

More information: Julian Peto et al. Weekly COVID-19 testing with household quarantine and contact tracing is feasible and would probably end the epidemic, *Royal Society Open Science* (2020). DOI: 10.1098/rsos.200915

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