

INDIA

# Coronavirus | Rapid antibody testing for hotspots first, says ICMR

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**Tests are likely to be rolled out by Wednesday**

The Indian Council of Medical Research (ICMR) said the rapid antibody based blood test for **COVID-19** will be deployed by this Wednesday in clusters and hot spots showing high incidence of confirmed cases.

Raman R Gangakhedkar, head of Epidemiology and Communicable Diseases Division of the ICMR explained that over all testing for COVID-19 using real-time reverse transcription polymerase chain reaction (RT-PCR), a laboratory technique combining reverse transcription

“At the same time, we are expecting delivery of Rapid Test kits (blood based) for use in response to COVID-19 situation. By Wednesday this should be up and running,” he added. National Task Force deliberated with experts for ascertaining use of these rapid test kits. We aim to start rapid antibody based blood test in clusters (with containment zones), and in large migration gatherings/evacuees centres,” he added.

The Health Ministry added that all States/UTs have been issued guidelines for implementing these tests and reports may be entered into the ICMR portal similar to results of real-time RT PCR tests for COVID-19.

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Explaining about who to test and the scale of testing the Health Ministry has said that testing has to be focused and judiciously done, even when scaled-up.

It added that contact-tracing is vital for this and is now greatly enabled by the AarogyaSetu App. “RT-PCR test detects the virus and the antibody tests, which use blood, detect the body’s response to the virus. A positive results tells that the body was exposed to the virus. The antibody tests, even when used for screening, must be used with care, as with all tests, and interpreted by a professional. As of now, when so used, they can inform how groups of people have been exposed,” noted the Ministry.

Experts point out that individual-level interpretation also needs to be done by a professional, who can take a comprehensive assessment. When combined with nucleic acid tests, the antibody tests can give a complete status.

Meanwhile a study titled, “Pooling RT-PCR or NGS samples has the potential to cost-effectively generate estimates of COVID-19 prevalence in resource limited environments” has noted that pooled COVID-19 tests could help scale up testing and identify and contain disease hotspots. The study was conducted by Center for Disease Dynamics, Economics & Policy among other.

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“Testing samples from multiple patients with a single PCR test, also known as pooled sampling, has been used previously in the early stages of the HIV epidemic when PCR costs were high. Here, we found that the use of a pooled testing strategy could reduce the time, cost, and resources required whilst identifying infected people in a population and estimating the infection rate. This would allow us to identify community

Laxminarayan, study author and CDDEP Director and Senior Fellow, in a release issued by the group.

The researchers used mathematical analysis to explore efficient pooling strategies using this technique. For a population containing 256 sampled individuals, where the maximum number of samples in a single pool is 64 (as pooling more samples may be beyond practical testing limits), with only 7.3 tests on the average, it could be possible to distinguish between prevalences of 1% and 5% with a probability of detection of 95% and probability of false alarm of 4%.

“This means that rather than testing all 256 individuals in the population, which would be highly costly, with an average of 7.3 tests a 5% prevalence of COVID-19 can be detected using this method,” said Krishna Narayanan, professor at Texas A&M University.

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