Indian Genomic Consortium for COVID19 has shared the Genome Sequencing data with States multiple times from 26th March 2021 onwards

The RTPCR Tests being used in India do not miss UK, Brazil, South Africa and Double Mutant variants

Indian Genomic Consortium has so far processed more than 13,000 samples for Genome Sequencing

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The Indian SARS-CoV-2 Genomics Consortium (INSACOG) is a network of ten laboratories established in December 2020 for continuously monitoring the genomic changes of SARS-CoV-2 in India, through Whole Genome Sequencing (WGS).

The detailed guidelines of INSACOG were published on the website of MoHFW on 27th December, 2020.

SOPs for epidemiological Surveillance and Response in the context of new variant of SARS-CoV -2 virus detected in UK were disseminated to all States as well as placed on the website of the Ministry on 22nd December, 2020.

As per the INSACOG guidelines, positive samples are sourced for Whole Genome Sequencing from:

- 1. International travelers who are positive by RT-PCR.
- 2. Community samples are coordinated by State Surveillance Officers who facilitate transfer of samples from districts/labs to the designated INSACOG labs. All states have been mapped to specific INSACOG

3. Samples from districts reporting exponential surge.
The 10 identified laboratories of INSACOG Consortium report their sequencing results to Central Surveillance unit of National Center for Diseases Control [NCDC]; from where it is shared with the State Surveillance Units (SSUs) of IDSP by the Central Surveillance Unit (CSU) through email as well as regular meetings by NCDC with State Surveillance Officers who in turn, take up the operational response with the Health Secretaries. Hence States are continuously informed of variant viruses having been found in the States.

In a few instances, the INSACOG labs have also communicated the results directly to the States.

NCDC has also communicated State specific results formally to the concerned States from time to time. For example,

• Himachal Results communicated on 8th AprilPunjab result communicated on 26th

MarchRajasthan results on 10th AprilMaharashtra results shared on nine different occasions from 12th March 2021 to 16th April 2021

Written communications on the need for more stringent measures have been sent at regular intervals not just to the high burden states, but also to all States by Secretary (H), AS(H), Director NCDC, and IDSP; to State and UT Chief Secretaries, ACS Health, SSOs, DHSs etc. The States/UTs have been repeatedly asked to keep strict vigil and take up stringent public health measures in view of unlock provisions and new strains coming from various Countries.

Press briefings, being conducted from time to time by MoHFW, provide specific updates on the current status of Variants of Concern and new mutants and also stress on increased and stringent public health interventions. In the press briefing organized on 24th March 2021, Director NCDC made a detailed presentation on various variants of Covid virus detected in the country.

Recently, the INSACOG guidelines were again shared with the States and States were advised to send samples for genome sequencing by also providing clinical data of positive persons. This will enable a great epidemiological insight into the link of the surge at various places to the variants; as well as enable INSACOG to discover other variants of concern, if present in the community. Many States, including Maharashtra, MP, Rajasthan and Kerala have not yet shared the data with NCDC, though Punjab and Delhi have shared such data.

As on 15/04/2021, 13,614 WGS samples have been processed at the 10 designated INSACOG labs. Of these, 1,189 samples have tested positive for variants of concern for SARS COV-2 in India. This includes 1109 samples with UK variants; 79 samples with South African variant and 1 sample with the Brazil variant.

Covid 19 virus has been mutating and various mutations have been found in many countries as well as in India, these include UK (17 mutations), Brazil (17 mutations), and South Africa (12 mutations) variants. These variants have higher transmissibility. The UK Variant has been found extensively in UK, all across Europe and has spread to Asia and America.

The Double mutation (2 mutations) is another variant and has been found in several countries like Australia, Belgium, Germany, Ireland, Namibia, New Zealand, Singapore, United Kingdom, USA. Higher transmissibility of this variant is not established as yet.

- The RT PCR tests being used in India do not miss these mutations as the RTPCR tests being used in India target more than two genes.
- Sensitivity and specificity of the RTPCR tests remains the same as earlier.

The detection of these mutations does not change the strategy of management which remains to test, track, trace and treat. The use of masks remains as the most important shield to prevent the spread of Covid 19.

MV

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