The INSACOG reports genomic surveillance of SARS CoV-2 across the country through sequencing of samples from Sentinel sites and also detailed State wise district analysis for some states under State MoUs (Maharashtra, Kerala and some others). A summary of the cumulative data of INSACOG and other state sequencing initiatives can be found at the INSACOG data portal link (http://clingen.igib.res.in/covid19genomes/) along with other INSACOG information at https://dbtindia.gov.in/insacog. New web-based query tool is now available on the data portal. All data presented on the portal is organized by date of sample collection, state, assigned lineage and mutations found on analysis.

INSACOG:

- Total number of samples processed so far is 1,28,901
- Total number of samples sequenced is 1,28,901
- Total number of sequences analysed are 1, 27,697

Samples from MoUs with state governments:

- Number of samples sequenced is 21,809

Total number of samples sequenced: \((1,28,901 + 21,809) = 1,50,710\)

The number of samples with pangolin lineage assigned are

<table>
<thead>
<tr>
<th>Community sample</th>
<th>Travelers sample</th>
<th>Total pangolin lineage assigned</th>
<th>Total VOC/VOI</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>90915</td>
<td>7757</td>
<td>98672</td>
<td>71428</td>
<td>72.4</td>
</tr>
</tbody>
</table>

Table 1: Cumulative samples with pangolin lineage assigned (as on 07.01.2021)

Cumulative distribution of VOC/VOI (as on 07.01.2022)

<table>
<thead>
<tr>
<th>Alpha Variant</th>
<th>Beta Variant</th>
<th>Gamma Variant</th>
<th>Delta Variant</th>
<th>B.1.617.1 and B.1.617.3</th>
<th>AY Series</th>
<th>Omicron</th>
<th>Total VOC/VOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tr&amp;Co</td>
<td>Com</td>
<td>Total</td>
<td>Tr&amp;Co</td>
<td>Com</td>
<td>Total</td>
<td>Tr&amp;Co</td>
<td>Com</td>
</tr>
<tr>
<td>577</td>
<td>3686</td>
<td>4263</td>
<td>117</td>
<td>102</td>
<td>219</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Tr&Co= Traveler and contacts; Com= Community
Variants reported during the period

Global
The Omicron wave continues to expand globally, with new highs being established for daily infections. Rate of hospitalization during this wave is much lower compared to the previous wave with Delta, attributable to both intrinsically reduced severity with lesser propensity to cause pneumonias, and higher population immunity. However, due to very high number of cases, absolute number of hospitalizations has crossed previous highs in many countries and is creating stress on healthcare systems. While deaths have been much lower during the new wave, compared to previous waves, there have been Omicron-associated deaths. In data so far, the majority of severe cases and deaths have been in unvaccinated subjects, with high protection associated with vaccination or previous infection.

National
Omicron is now in community transmission in India and has become dominant in multiple metros, where new cases have been rising exponentially. BA.2 lineage is a substantial fraction in India and S-gene dropout based screening is thus likely to give high false negatives. Tests suitable for PCR based screening applicable to all Omicron lineages have been approved for use. While most Omicron cases so far have been asymptomatic or mild, hospitalizations and ICU cases have been increasing in the current wave. The threat level remains unchanged.

The recently reported B.1.640.2 lineage is being monitored. There is no evidence of rapid spread and while it has features of immune escape, it is currently not a variant of concern. So far, no case detected in India.