

INSACOG BULLETIN

3rd April, 2023

The INSACOG reports genomic surveillance of SARS-CoV-2 by whole genome sequencing of samples from sentinel sites across the country and international passengers arriving in India. A summary of the cumulative data of INSACOG and other state sequencing initiatives can be found in the INSACOG data portal along with other INSACOG related information at <https://ibdc.rcb.res.in/>

INSACOG:

Total number of samples sequenced is 276,292

Samples sequenced by IGSLs under State government MoUs: 34,763

Total number of samples sequenced: 311,055

The number of samples with pangolin lineages assigned are given below:

Table 1: Cumulative samples with pangolin lineage assigned (as on 31.03.2022)

Community sample	Travelers sample	Total pangolin lineage assigned	Total VOC/VOI	Percentage
192500	12449	204949	170072	83.0

DISTRIBUTION OF LINEAGES (AS ON 31-03-2023)

Alpha Variant			Beta Variant			Gamma Variant			Delta variant			B.1.617.1 and B.1.617.3			AY Series			Omicron*		
Tr&Co	Com	Total	Tr&Co	Com	Total	Tr&Co	Com	Total	Tr&Co	Com	Total	Tr&Co	Com	Total	Tr&Co	Com	Total	Tr&Co	Com*	Total
577	3691	4268	117	105	222	1	2	3	442	44217	44659	84	5540	5624	270	20357	20627	6265	84306	90894

Tr&Co= Travelers and contacts ; Com= Community samples

DISTRIBUTION OF LINEAGES (AS ON 31-03-2023)

Recombinant																												XE Variant	XM Variant	XU Variant	XJ Variant	XG Variant	Total VOC/VOI																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
XAR	XAH	XAB	XAG	XAW	XBB	XBB.1	XBB.1.1	XBB.1.2	XBB.1.3	XBB.1.4	XBB.1.5	XBB.1.5.1	XBB.1.5.2	XBB.1.5.3	XBB.1.5.4	XBB.1.5.5	XBB.1.5.6	XBB.1.5.7	XBB.1.5.8	XBB.1.5.9	XBB.1.5.10	XBB.1.5.11	XBB.1.5.12	XBB.1.5.13	XBB.1.5.14	XBB.1.5.15	XBB.1.5.16	XBB.1.5.17	XBB.1.5.18	XBB.1.5.19	XBB.1.5.20	XBB.1.5.21	XBB.1.5.22	XBB.1.5.23	XBB.1.5.24	XBB.1.5.25	XBB.1.5.26	XBB.1.5.27	XBB.1.5.28	XBB.1.5.29	XBB.1.5.30	XBB.1.5.31	XBB.1.5.32	XBB.1.5.33	XBB.1.5.34	XBB.1.5.35	XBB.1.5.36	XBB.1.5.37	XBB.1.5.38	XBB.1.5.39	XBB.1.5.40	XBB.1.5.41	XBB.1.5.42	XBB.1.5.43	XBB.1.5.44	XBB.1.5.45	XBB.1.5.46	XBB.1.5.47	XBB.1.5.48	XBB.1.5.49	XBB.1.5.50	XBB.1.5.51	XBB.1.5.52	XBB.1.5.53	XBB.1.5.54	XBB.1.5.55	XBB.1.5.56	XBB.1.5.57	XBB.1.5.58	XBB.1.5.59	XBB.1.5.60	XBB.1.5.61	XBB.1.5.62	XBB.1.5.63	XBB.1.5.64	XBB.1.5.65	XBB.1.5.66	XBB.1.5.67	XBB.1.5.68	XBB.1.5.69	XBB.1.5.70	XBB.1.5.71	XBB.1.5.72	XBB.1.5.73	XBB.1.5.74	XBB.1.5.75	XBB.1.5.76	XBB.1.5.77	XBB.1.5.78	XBB.1.5.79	XBB.1.5.80	XBB.1.5.81	XBB.1.5.82	XBB.1.5.83	XBB.1.5.84	XBB.1.5.85	XBB.1.5.86	XBB.1.5.87	XBB.1.5.88	XBB.1.5.89	XBB.1.5.90	XBB.1.5.91	XBB.1.5.92	XBB.1.5.93	XBB.1.5.94	XBB.1.5.95	XBB.1.5.96	XBB.1.5.97	XBB.1.5.98	XBB.1.5.99	XBB.1.5.100	XBB.1.5.101	XBB.1.5.102	XBB.1.5.103	XBB.1.5.104	XBB.1.5.105	XBB.1.5.106	XBB.1.5.107	XBB.1.5.108	XBB.1.5.109	XBB.1.5.110	XBB.1.5.111	XBB.1.5.112	XBB.1.5.113	XBB.1.5.114	XBB.1.5.115	XBB.1.5.116	XBB.1.5.117	XBB.1.5.118	XBB.1.5.119	XBB.1.5.120	XBB.1.5.121	XBB.1.5.122	XBB.1.5.123	XBB.1.5.124	XBB.1.5.125	XBB.1.5.126	XBB.1.5.127	XBB.1.5.128	XBB.1.5.129	XBB.1.5.130	XBB.1.5.131	XBB.1.5.132	XBB.1.5.133	XBB.1.5.134	XBB.1.5.135	XBB.1.5.136	XBB.1.5.137	XBB.1.5.138	XBB.1.5.139	XBB.1.5.140	XBB.1.5.141	XBB.1.5.142	XBB.1.5.143	XBB.1.5.144	XBB.1.5.145	XBB.1.5.146	XBB.1.5.147	XBB.1.5.148	XBB.1.5.149	XBB.1.5.150	XBB.1.5.151	XBB.1.5.152	XBB.1.5.153	XBB.1.5.154	XBB.1.5.155	XBB.1.5.156	XBB.1.5.157	XBB.1.5.158	XBB.1.5.159	XBB.1.5.160	XBB.1.5.161	XBB.1.5.162	XBB.1.5.163	XBB.1.5.164	XBB.1.5.165	XBB.1.5.166	XBB.1.5.167	XBB.1.5.168	XBB.1.5.169	XBB.1.5.170	XBB.1.5.171	XBB.1.5.172	XBB.1.5.173	XBB.1.5.174	XBB.1.5.175	XBB.1.5.176	XBB.1.5.177	XBB.1.5.178	XBB.1.5.179	XBB.1.5.180	XBB.1.5.181	XBB.1.5.182	XBB.1.5.183	XBB.1.5.184	XBB.1.5.185	XBB.1.5.186	XBB.1.5.187	XBB.1.5.188	XBB.1.5.189	XBB.1.5.190	XBB.1.5.191	XBB.1.5.192	XBB.1.5.193	XBB.1.5.194	XBB.1.5.195	XBB.1.5.196	XBB.1.5.197	XBB.1.5.198	XBB.1.5.199	XBB.1.5.200	XBB.1.5.201	XBB.1.5.202	XBB.1.5.203	XBB.1.5.204	XBB.1.5.205	XBB.1.5.206	XBB.1.5.207	XBB.1.5.208	XBB.1.5.209	XBB.1.5.210	XBB.1.5.211	XBB.1.5.212	XBB.1.5.213	XBB.1.5.214	XBB.1.5.215	XBB.1.5.216	XBB.1.5.217	XBB.1.5.218	XBB.1.5.219	XBB.1.5.220	XBB.1.5.221	XBB.1.5.222	XBB.1.5.223	XBB.1.5.224	XBB.1.5.225	XBB.1.5.226	XBB.1.5.227	XBB.1.5.228	XBB.1.5.229	XBB.1.5.230	XBB.1.5.231	XBB.1.5.232	XBB.1.5.233	XBB.1.5.234	XBB.1.5.235	XBB.1.5.236	XBB.1.5.237	XBB.1.5.238	XBB.1.5.239	XBB.1.5.240	XBB.1.5.241	XBB.1.5.242	XBB.1.5.243	XBB.1.5.244	XBB.1.5.245	XBB.1.5.246	XBB.1.5.247	XBB.1.5.248	XBB.1.5.249	XBB.1.5.250	XBB.1.5.251	XBB.1.5.252	XBB.1.5.253	XBB.1.5.254	XBB.1.5.255	XBB.1.5.256	XBB.1.5.257	XBB.1.5.258	XBB.1.5.259	XBB.1.5.260	XBB.1.5.261	XBB.1.5.262	XBB.1.5.263	XBB.1.5.264	XBB.1.5.265	XBB.1.5.266	XBB.1.5.267	XBB.1.5.268	XBB.1.5.269	XBB.1.5.270	XBB.1.5.271	XBB.1.5.272	XBB.1.5.273	XBB.1.5.274	XBB.1.5.275	XBB.1.5.276	XBB.1.5.277	XBB.1.5.278	XBB.1.5.279	XBB.1.5.280	XBB.1.5.281	XBB.1.5.282	XBB.1.5.283	XBB.1.5.284	XBB.1.5.285	XBB.1.5.286	XBB.1.5.287	XBB.1.5.288	XBB.1.5.289	XBB.1.5.290	XBB.1.5.291	XBB.1.5.292	XBB.1.5.293	XBB.1.5.294	XBB.1.5.295	XBB.1.5.296	XBB.1.5.297	XBB.1.5.298	XBB.1.5.299	XBB.1.5.300	XBB.1.5.301	XBB.1.5.302	XBB.1.5.303	XBB.1.5.304	XBB.1.5.305	XBB.1.5.306	XBB.1.5.307	XBB.1.5.308	XBB.1.5.309	XBB.1.5.310	XBB.1.5.311	XBB.1.5.312	XBB.1.5.313	XBB.1.5.314	XBB.1.5.315	XBB.1.5.316	XBB.1.5.317	XBB.1.5.318	XBB.1.5.319	XBB.1.5.320	XBB.1.5.321	XBB.1.5.322	XBB.1.5.323	XBB.1.5.324	XBB.1.5.325	XBB.1.5.326	XBB.1.5.327	XBB.1.5.328	XBB.1.5.329	XBB.1.5.330	XBB.1.5.331	XBB.1.5.332	XBB.1.5.333	XBB.1.5.334	XBB.1.5.335	XBB.1.5.336	XBB.1.5.337	XBB.1.5.338	XBB.1.5.339	XBB.1.5.340	XBB.1.5.341	XBB.1.5.342	XBB.1.5.343	XBB.1.5.344	XBB.1.5.345	XBB.1.5.346	XBB.1.5.347	XBB.1.5.348	XBB.1.5.349	XBB.1.5.350	XBB.1.5.351	XBB.1.5.352	XBB.1.5.353	XBB.1.5.354	XBB.1.5.355	XBB.1.5.356	XBB.1.5.357	XBB.1.5.358	XBB.1.5.359	XBB.1.5.360	XBB.1.5.361	XBB.1.5.362	XBB.1.5.363	XBB.1.5.364	XBB.1.5.365	XBB.1.5.366	XBB.1.5.367	XBB.1.5.368	XBB.1.5.369	XBB.1.5.370	XBB.1.5.371	XBB.1.5.372	XBB.1.5.373	XBB.1.5.374	XBB.1.5.375	XBB.1.5.376	XBB.1.5.377	XBB.1.5.378	XBB.1.5.379	XBB.1.5.380	XBB.1.5.381	XBB.1.5.382	XBB.1.5.383	XBB.1.5.384	XBB.1.5.385	XBB.1.5.386	XBB.1.5.387	XBB.1.5.388	XBB.1.5.389	XBB.1.5.390	XBB.1.5.391	XBB.1.5.392	XBB.1.5.393	XBB.1.5.394	XBB.1.5.395	XBB.1.5.396	XBB.1.5.397	XBB.1.5.398	XBB.1.5.399	XBB.1.5.400	XBB.1.5.401	XBB.1.5.402	XBB.1.5.403	XBB.1.5.404	XBB.1.5.405	XBB.1.5.406	XBB.1.5.407	XBB.1.5.408	XBB.1.5.409	XBB.1.5.410	XBB.1.5.411	XBB.1.5.412	XBB.1.5.413	XBB.1.5.414	XBB.1.5.415	XBB.1.5.416	XBB.1.5.417	XBB.1.5.418	XBB.1.5.419	XBB.1.5.420	XBB.1.5.421	XBB.1.5.422	XBB.1.5.423	XBB.1.5.424	XBB.1.5.425	XBB.1.5.426	XBB.1.5.427	XBB.1.5.428	XBB.1.5.429	XBB.1.5.430	XBB.1.5.431	XBB.1.5.432	XBB.1.5.433	XBB.1.5.434	XBB.1.5.435	XBB.1.5.436	XBB.1.5.437	XBB.1.5.438	XBB.1.5.439	XBB.1.5.440	XBB.1.5.441	XBB.1.5.442	XBB.1.5.443	XBB.1.5.444	XBB.1.5.445	XBB.1.5.446	XBB.1.5.447	XBB.1.5.448	XBB.1.5.449	XBB.1.5.450	XBB.1.5.451	XBB.1.5.452	XBB.1.5.453	XBB.1.5.454	XBB.1.5.455	XBB.1.5.456	XBB.1.5.457	XBB.1.5.458	XBB.1.5.459	XBB.1.5.460	XBB.1.5.461	XBB.1.5.462	XBB.1.5.463	XBB.1.5.464	XBB.1.5.465	XBB.1.5.466	XBB.1.5.467	XBB.1.5.468	XBB.1.5.469	XBB.1.5.470	XBB.1.5.471	XBB.1.5.472	XBB.1.5.473	XBB.1.5.474	XBB.1.5.475	XBB.1.5.476	XBB.1.5.477	XBB.1.5.478	XBB.1.5.479	XBB.1.5.480	XBB.1.5.481	XBB.1.5.482	XBB.1.5.483	XBB.1.5.484	XBB.1.5.485	XBB.1.5.486	XBB.1.5.487	XBB.1.5.488	XBB.1.5.489	XBB.1.5.490	XBB.1.5.491	XBB.1.5.492	XBB.1.5.493	XBB.1.5.494	XBB.1.5.495	XBB.1.5.496	XBB.1.5.497	XBB.1.5.498	XBB.1.5.499	XBB.1.5.500	XBB.1.5.501	XBB.1.5.502	XBB.1.5.503	XBB.1.5.504	XBB.1.5.505	XBB.1.5.506	XBB.1.5.507	XBB.1.5.508	XBB.1.5.509	XBB.1.5.510	XBB.1.5.511	XBB.1.5.512	XBB.1.5.513	XBB.1.5.514	XBB.1.5.515	XBB.1.5.516	XBB.1.5.517	XBB.1.5.518	XBB.1.5.519	XBB.1.5.520	XBB.1.5.521	XBB.1.5.522	XBB.1.5.523	XBB.1.5.524	XBB.1.5.525	XBB.1.5.526	XBB.1.5.527	XBB.1.5.528	XBB.1.5.529	XBB.1.5.530	XBB.1.5.531	XBB.1.5.532	XBB.1.5.533	XBB.1.5.534	XBB.1.5.535	XBB.1.5.536	XBB.1.5.537	XBB.1.5.538	XBB.1.5.539	XBB.1.5.540	XBB.1.5.541	XBB.1.5.542	XBB.1.5.543	XBB.1.5.544	XBB.1.5.545	XBB.1.5.546	XBB.1.5.547	XBB.1.5.548	XBB.1.5.549	XBB.1.5.550	XBB.1.5.551	XBB.1.5.552	XBB.1.5.553	XBB.1.5.554	XBB.1.5.555	XBB.1.5.556	XBB.1.5.557	XBB.1.5.558	XBB.1.5.559	XBB.1.5.560	XBB.1.5.561	XBB.1.5.562	XBB.1.5.563	XBB.1.5.564	XBB.1.5.565	XBB.1.5.566	XBB.1.5.567	XBB.1.5.568	XBB.1.5.569	XBB.1.5.570	XBB.1.5.571	XBB.1.5.572	XBB.1.5.573	XBB.1.5.574	XBB.1.5.575	XBB.1.5.576	XBB.1.5.577	XBB.1.5.578	XBB.1.5.579	XBB.1.5.580	XBB.1.5.581	XBB.1.5.582	XBB.1.5.583	XBB.1.5.584	XBB.1.5.585	XBB.1.5.586	XBB.1.5.587	XBB.1.5.588	XBB.1.5.589	XBB.1.5.590	XBB.1.5.591	XBB.1.5.592	XBB.1.5.593	XBB.1.5.594	XBB.1.5.595	XBB.1.5.596	XBB.1.5.597	XBB.1.5.598	XBB.1.5.599	XBB.1.5.600	XBB.1.5.601	XBB.1.5.602	XBB.1.5.603	XBB.1.5.604	XBB.1.5.605	XBB.1.5.606	XBB.1.5.607	XBB.1.5.608	XBB.1.5.609	XBB.1.5.610	XBB.1.5.611	XBB.1.5.612	XBB.1.5.613	XBB.1.5.614	XBB.1.5.615	XBB.1.5.616	XBB.1.5.617	XBB.1.5.618	XBB.1.5.619	XBB.1.5.620	XBB.1.5.621	XBB.1.5.622	XBB.1.5.623	XBB.1.5.624	XBB.1.5.625	XBB.1.5.626	XBB.1.5.627	XBB.1.5.628	XBB.1.5.629	XBB.1.5.630	XBB.1.5.631	XBB.1.5.632	XBB.1.5.633	XBB.1.5.634	XBB.1.5.635	XBB.1.5.636	XBB.1.5.637	XBB.1.5.638	XBB.1.5.639	XBB.1.5.640	XBB.1.5.641	XBB.1.5.642	XBB.1.5.643	XBB.1.5.644	XBB.1.5.645	XBB.1.5.646	XBB.1.5.647	XBB.1.5.648	XBB.1.5.649	XBB.1.5.650	XBB.1.5.651	XBB.1.5.652	XBB.1.5.653	XBB.1.5.654	XBB.1.5.655	XBB.1.5.656	XBB.1.5.657	XBB.1.5.658	XBB.1.5.659	XBB.1.5.660	XBB.1.5.661	XBB.1.5.662	XBB.1.5.663	XBB.1.5.664	XBB.1.5.665	XBB.1.5.666	XBB.1.5.667	XBB.1.5.668	XBB.1.5.669	XBB.1.5.670	XBB.1.5.671	XBB.1.5.672	XBB.1.5.673	XBB.1.5.674	XBB.1.5.675	XBB.1.5.676	XBB.1.5.677	XBB.1.5.678	XBB.1.5.679	XBB.1.5.680	XBB.1.5.681	XBB.1.5.682	XBB.1.5.683	XBB.1.5.684	XBB.1.5.685	XBB.1.5.686	XBB.1.5.687	XBB.1.5.688	XBB.1.5.689	XBB.1.5.690	XBB.1.5.691	XBB.1.5.692	XBB.1.5.693	XBB.1.5.694	XBB.1.5.695	XBB.1.5.696	XBB.1.5.697	XBB.1.5.698	XBB.1.5.699	XBB.1.5.700	XBB.1.5.701	XBB.1.5.702	XBB.1.5.703	XBB.1.5.704	XBB.1.5.705	XBB.1.5.706	XBB.1.5.707	XBB.1.5.708	XBB.1.5.709	XBB.1.5.710

INSACOG BULLETIN

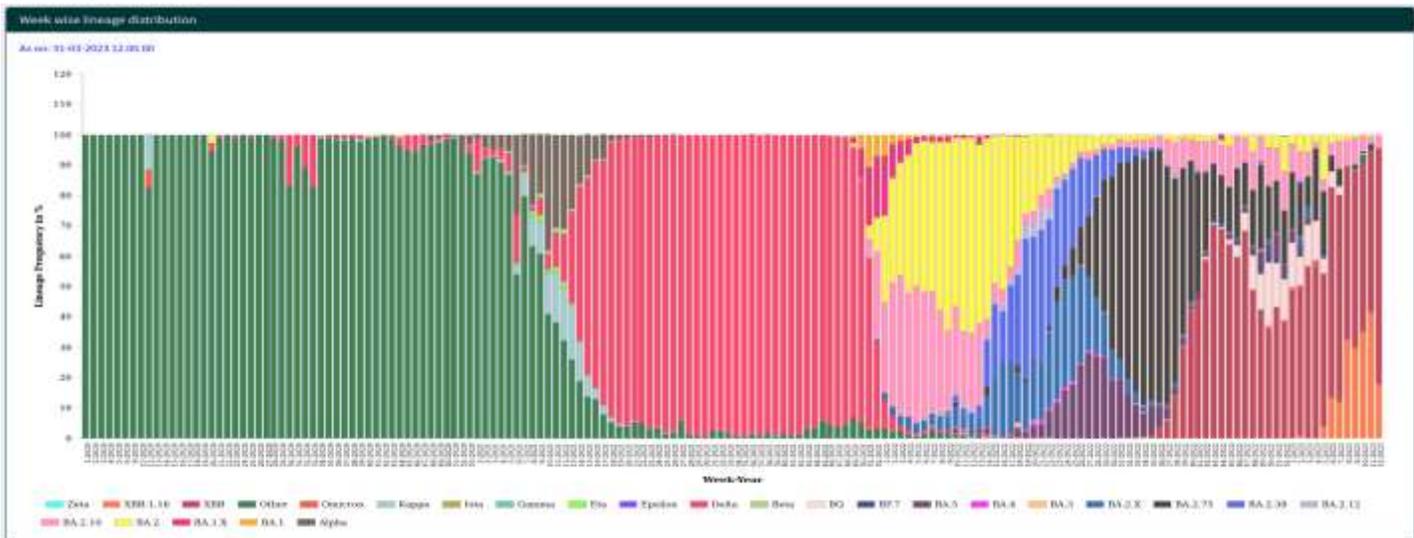
Global Scenario

Globally, nearly 3.6 million new cases and 25000 deaths have been reported in the last 28 days^[1]. During the week 10 of the year 2023, there has been a continued increasing trend in the proportions of recombinant lineages globally. Despite this overall downward trend, it is important to note that several countries have recently reported significant increases in cases. Currently, there is one variant of interest (VOI), XBB.1.5, and six variants under monitoring (VUMs). The VUMs are BQ.1, BA.2.75, CH.1.1, XBB, XBF and XBB.1.16; XBB.1.16 was added to this list on 22 March 2023. XBB.1.16 is a recombinant of BA.2.10.1 and BA.2.75 and has three additional mutations in the SARS-CoV-2 spike protein (E180V, F486P and K478R) compared to its parent lineage XBB. The F486P mutation is shared with XBB.1.5. 712 XBB.1.16 sequences have been reported from 21 countries. However, so far reports do not indicate a rise in hospitalizations, ICU admissions, or deaths due to XBB.1.16.

Indian Scenario

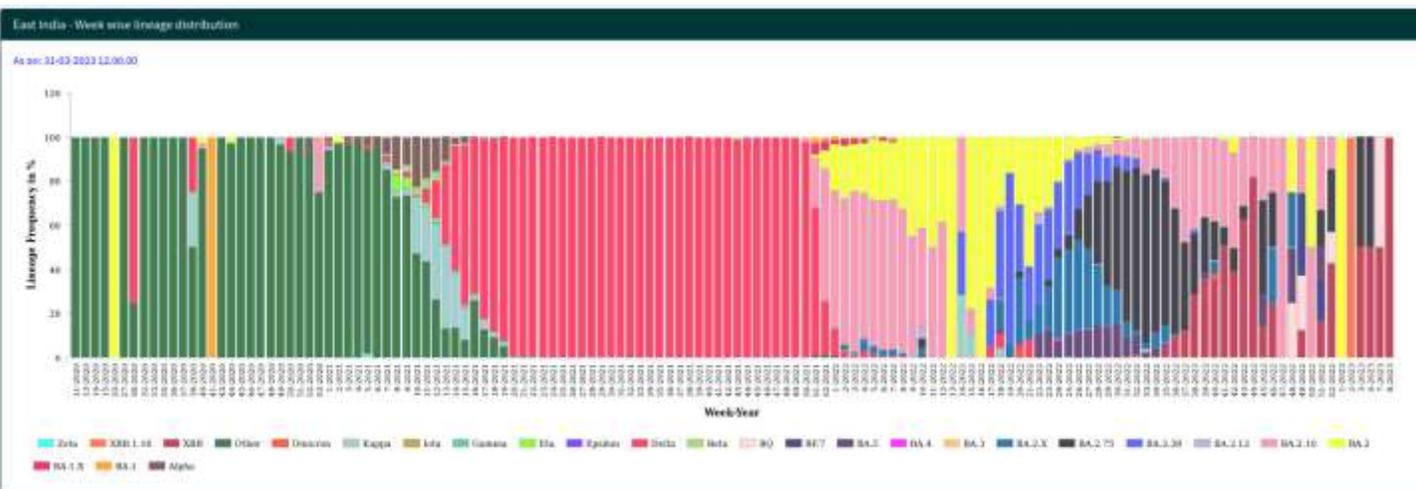
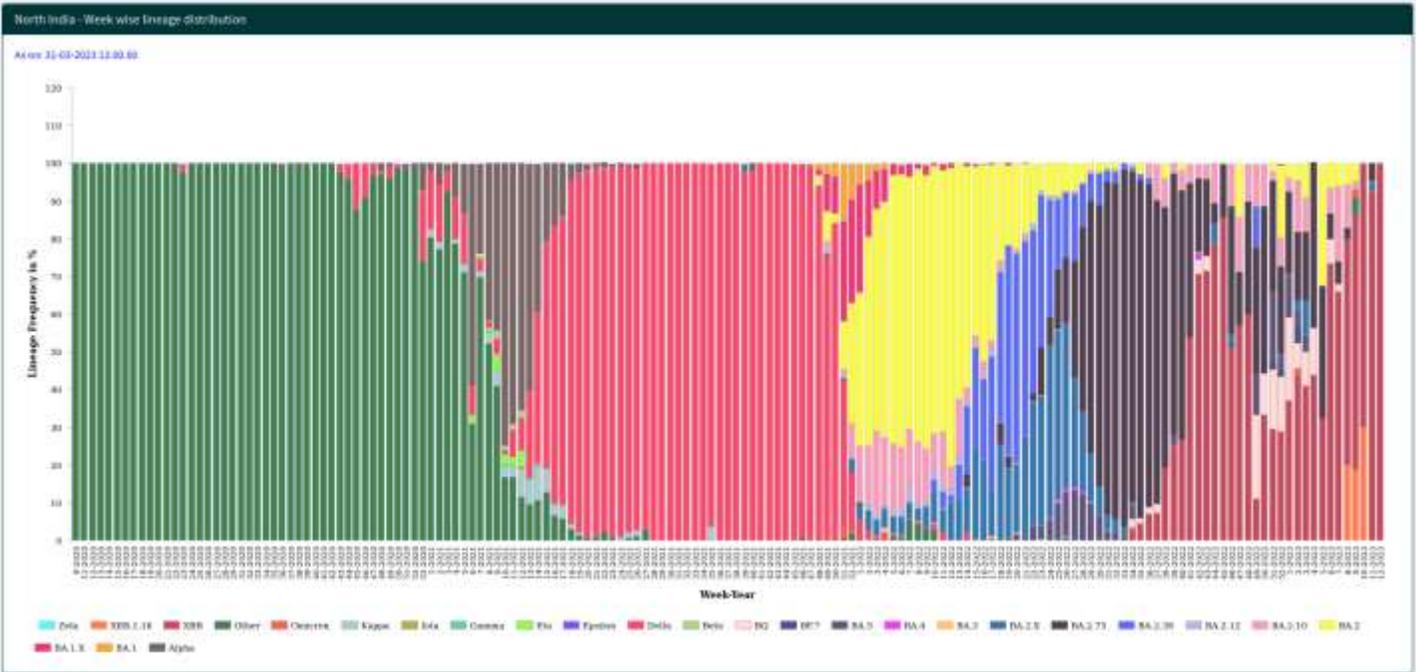
Omicron and its sub-lineages continue to be the dominant variants in India. An increase in infection rate has been observed. A newly emerged recombinant variant XBB.1.16 has been observed in Western and Southern part of India, accounting for 17.8% of the infection till date. Among the samples collected till the third week of March 2023, XBB continued to be the most commonly circulating Omicron sub-lineages (77.8%). A few BA.2.10 sub-lineage was detected in some part of India, whereas XBB was the most prevalent sub-lineage of omicron variant. Since the number of samples were relatively low in some part of India, the graphical representation should be considered in that perspective too. However, no increase in disease severity or hospitalization has been observed.

Country wide analysis:



Region-wise analysis:

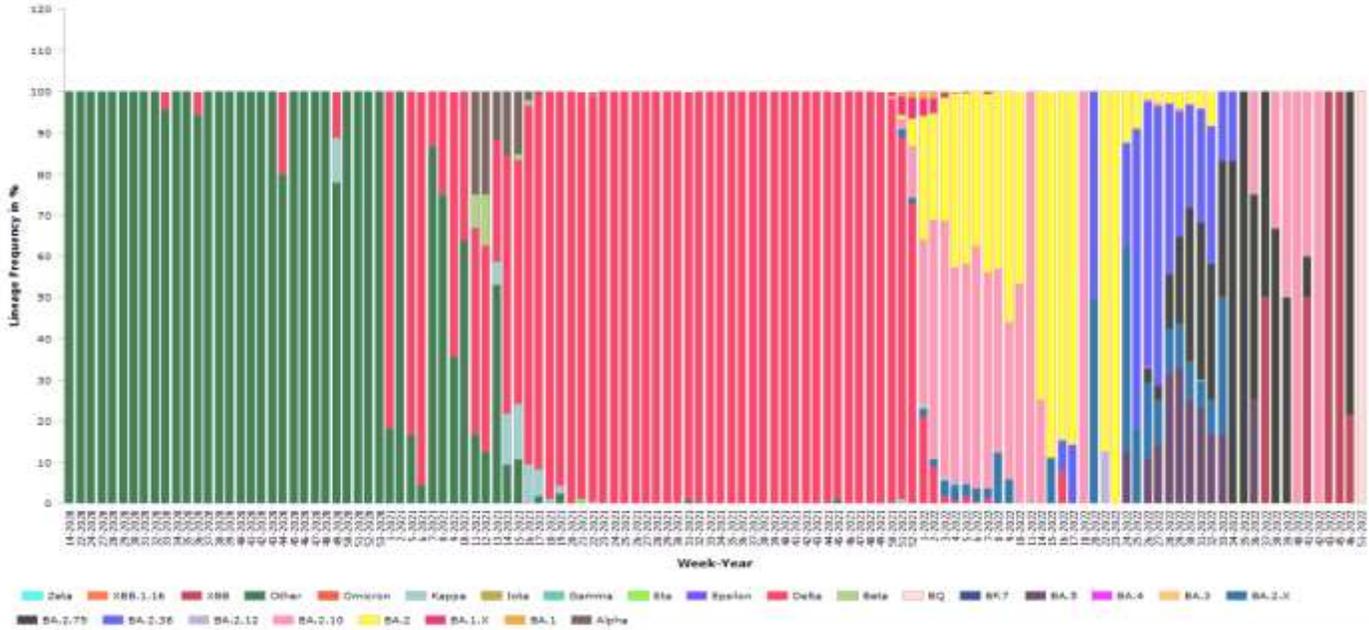
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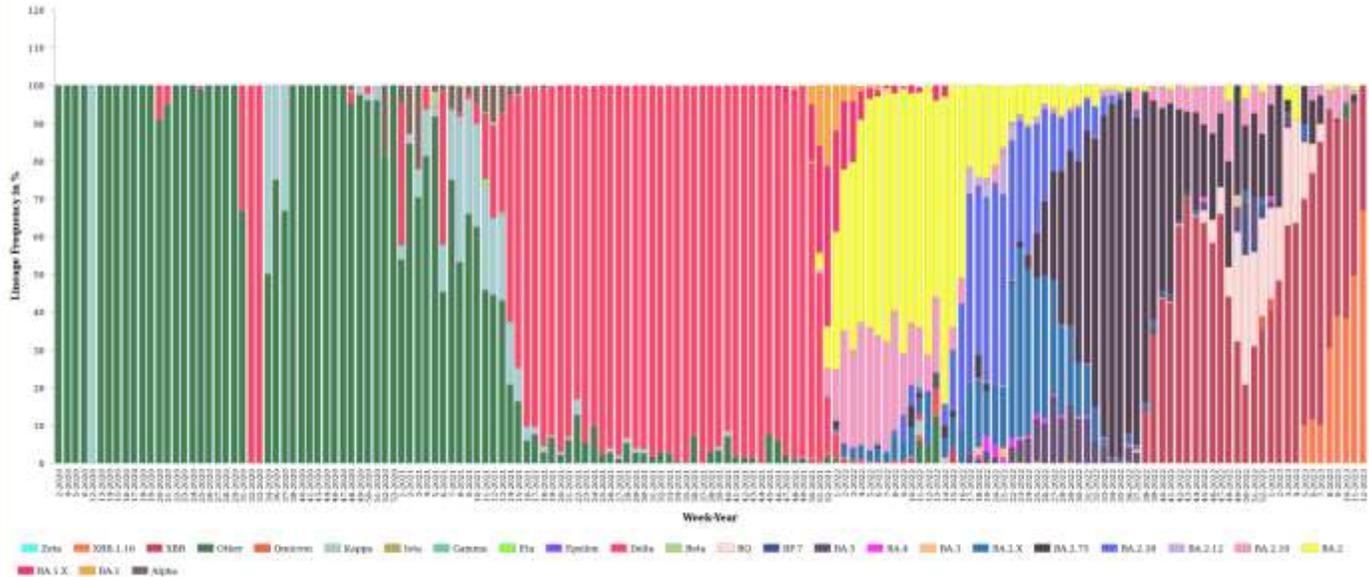
NorthEast India - Week wise lineage distribution

As on: 24-03-2023 11:00:00

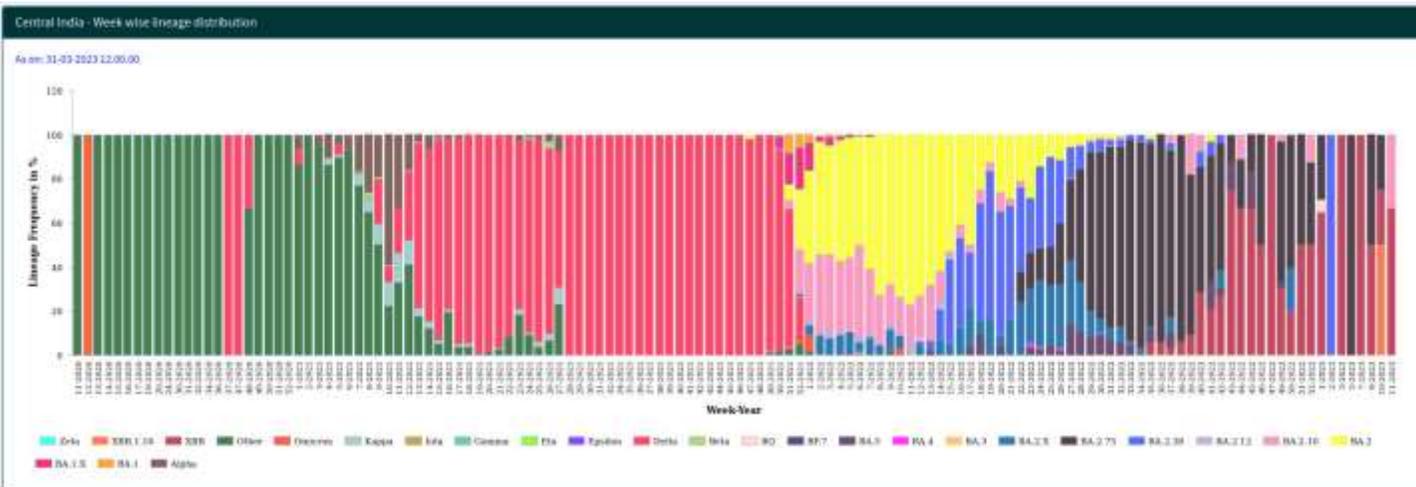
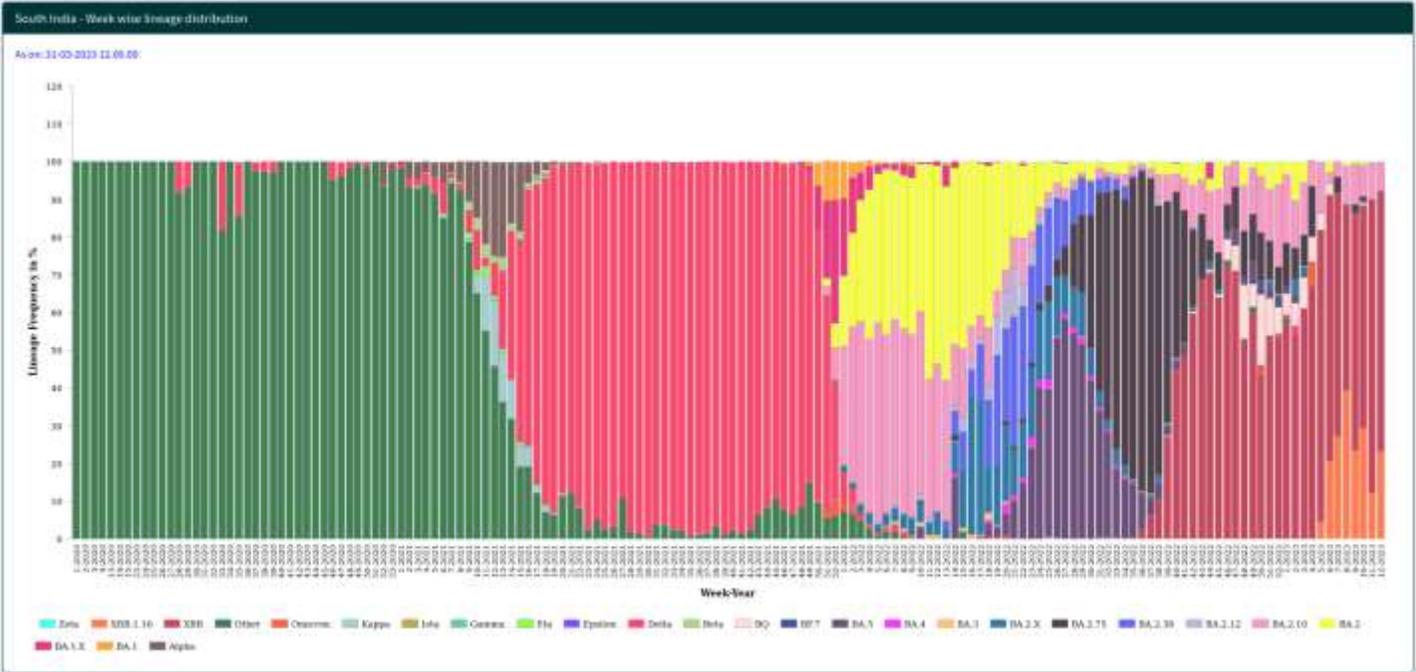


West India - Week wise lineage distribution

As on: 21-03-2023 12:00:00



INSACOG BULLETIN



Reference:

1. WHO weekly epidemiological report.