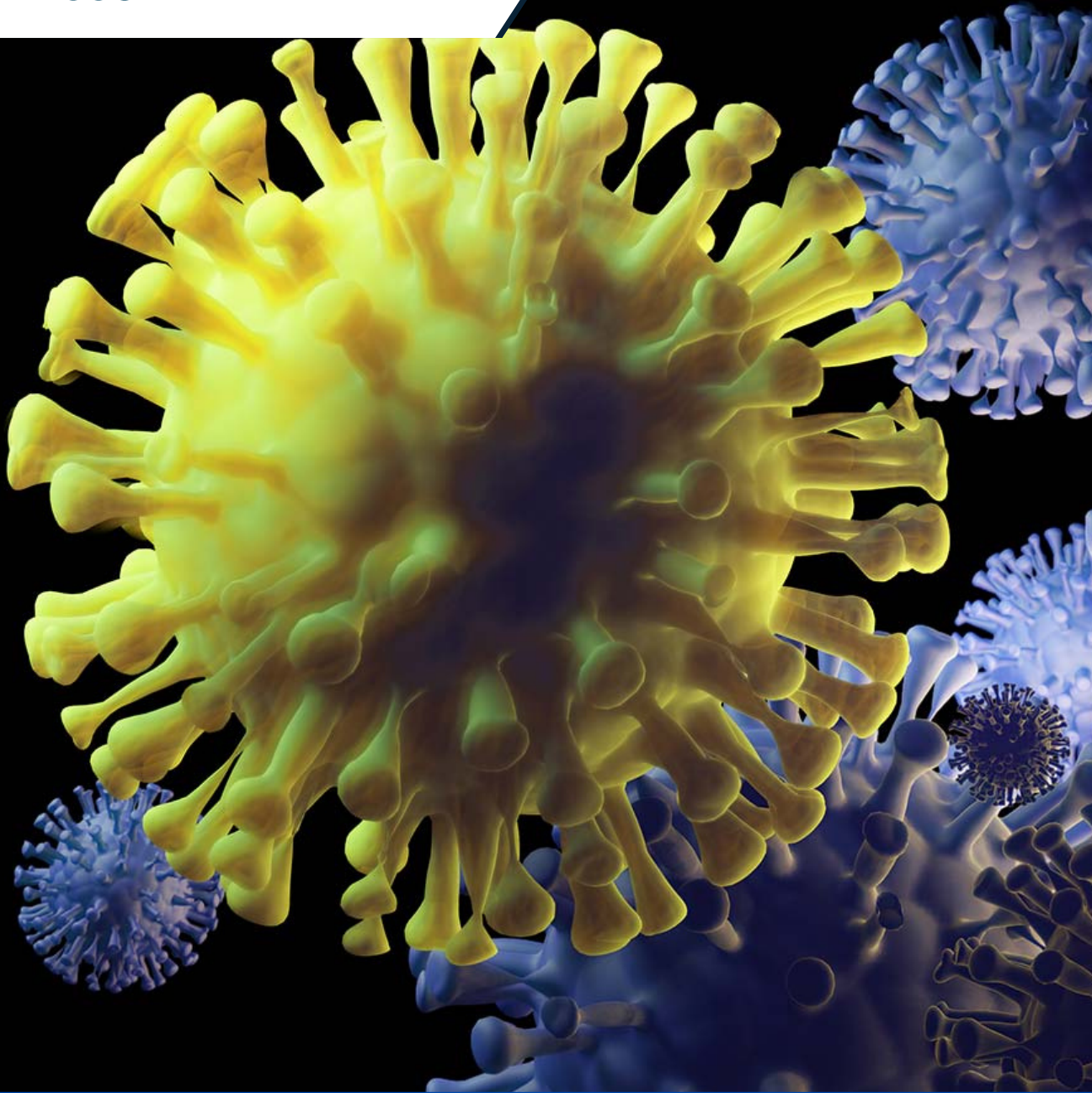


PRAYAS4IAS

AN INITIATIVE BY THE PRAYAS INDIA

SPECIAL ISSUE MAY WEEK 1



Special Issue

May (Week 1)

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All about Coronavirus variants

(Source: [The Hindu](#))

Context: SARS-CoV-2 is new in humans and as it spreads, mutations are very frequent. Emerging variants with higher transmission efficiency become dominant, tending to replace others. Such frontrunners emerge in different geographic communities where the virus is epidemic, spreading widely. Variants were detected in the U.K. and South Africa because genetic studies were systematically done. Brazil variant was discovered in Japan, in travellers from Brazil, and its origin traced back.

Details:

- The ability to detect and track variants hinges on laboratory capacity for whole genome sequencing of viruses.
- Globally, over 1 million SARS CoV-2 genomes have been sequenced to-date, providing a high resolution, spatio-temporally granular readout of virus evolution.
- More importantly, this has allowed the identification and documentation of variant viruses with altered properties compared to the virus that started the pandemic.
- As the importance of ‘variants of concern’ (VOC) was appreciated, the Indian SARS CoV-2 Genomic Consortium (INSACOG), a network of ten competent public-sector laboratories for genomic surveillance, was established, and the genetic variant landscape is being surveyed in India.

Nomenclature schemes

- There are three different schemes of nomenclature of SARS-CoV-2 variants. The widely used one is the ‘Phylogenetic Assignment of Global Outbreak Lineages’ (PANGOLIN) that uses a hierarchical system based on genetic relatedness – an invaluable tool for genomic surveillance.
- It uses alphabets (A, B, C, P) and numerals starting with 1. Variant lineages are at the emerging edge of the pandemic in different geographies. Lineage B is the most prolific.
- The variants in circulation are B.1; B.1.1; B.1.1.7; B.1.167; B.1.177; B.1.351, B.1.427 and B.1.429.
- Lineage P.1 has deviated from the original B.
- For convenience, the three most frequent ones are named by their geography of origin — ‘U.K. variant’ for B.1.1.7; ‘South Africa variant’ for B.1.351; and ‘Brazil variant’ for P.1.
- They had been detected in 2020 — September (U.K.), October (South Africa) and December (Brazil). Variants in India include the so-called double mutant B.1.617 spreading in Maharashtra and B.1.618 spreading in West Bengal.
- Mutations can be pinpointed using the nucleotide position on the genome and the switched amino acids consequent to mutation.
- The original pandemic virus (founder variant) was Wu.Hu.1 (Wuhan virus). In a few months, variant D614G emerged and became globally dominant.

Matters of concern

- The ‘concern’ in VOC comprises three sinister properties – transmission efficiency, disease severity and escape from immunity cover of vaccination.
- In many countries, including India, the VOC, by virtue of increased transmissibility, have kicked off new wave(s) of epidemic transmission.
- Unfortunately, at that precise time, as case counts were low, there was widespread relaxation of COVID-appropriate behaviour.
- Together, this has contributed to a rapidly ascending second wave — daily numbers far exceeding those during the earlier wave.



- Regarding virulence (propensity to cause severe/life-threatening disease), the U.K. variant is worse. The South Africa and Brazil variants do not seem to have higher virulence.
- The third concern is regarding the immunity cover offered by vaccination using antigens made from D614G variant — which applies to most vaccines in current use. Lowered efficacy of vaccines was found more with the South African and less with the Brazil variant.
- Hence, reinfection can occur in spite of immunity by earlier D614G infection or vaccination. Vaccine efficacy may be lower now than what was determined in phase-3 trials as VOC were not then widely prevalent.
- Fortunately, mRNA (Pfizer and Moderna) vaccines have broader immunity for different reasons, and they protect better against these two variants.
- Karolinska Institute in Sweden created an antigen using new variant RBD peptide with adjuvant, and inoculated monkeys already primed with an older vaccine. The resultant booster response was not only high but also broad, covering new variants.
- This approach, called ‘hetero boosting’ by a different vaccine, offers a way to manage the ‘vaccine-escape’ variants until newer vaccines become available.

Lessons learnt

- An important lesson the pandemic has taught us in India is the critical importance of biomedical research and capacity building – for saving lives and economic growth.
- We need a foundation of broad-based research, in universities, medical colleges and biotechnology companies, all of which must be funded, encouraged, appreciated, and talent rewarded.
- While some endeavours have been initiated, they must take off in a big way, and India must invest heavily in biosciences. After a decade, its products and profit will make us healthier and wealthier.

All about Chhattisgarh’s vaccination policy

(Source: [Indian Express](#))

Context: Recently, the Chhattisgarh High Court heard intervention applications filed by politicians and lawyers against the state government’s vaccination policy. One of the interventions was filed by the Janta Congress Chhattisgarh head Amit Jogi, who is the son of former chief minister late Ajit Jogi, against the state’s decision to administer the vaccines based on the economic situation of the citizens. The bench of the High Court took objections to the state’s vaccination policy, raised some questions, and advised the state to make some changes before adjourning the matter to May 7.

What is Chhattisgarh’s vaccination policy?

- The state health department on April 30 issued a circular through Renu G Pillai, Additional Chief Secretary, then posted with the health department, to all the district collectors, informing them that due to the limited number of vaccines available to the state, vaccination of people between 18-44 years of age would be held in three stages.
- Firstly, the Antyodaya Card holders are to be vaccinated, followed by the BPL card holders and then the APL card holders.
- The circular clarified that in the first phase only the Antyodaya Card holders will be vaccinated, and only they should be registered through the CoWin portal.
- The circular also stated that not more than two vaccinations centres are to be opened per block to ensure that Covid-appropriate behavior is followed.



How many are to be vaccinated across the state in the 18-44 age group? How many will be vaccinated in the first round?

- Chief Minister Bhupesh Baghel, while speaking to the press, said that 43% population of the state, which is 1.20 crore, will be vaccinated.
- However, the state has around 14 lakh Antyodaya card holders and around 42 lakh beneficiaries.

Who is an Antyodaya card holder

- Antyodaya Anna Yojana was a Union government scheme in which “poorest of the poor” were identified and given a yellow ration card, which indicated that they were to be given rice, wheat and other ration items at heavily subsidised rates.
- Families with annual income less than Rs 15,000, senior citizens with no support, widows and unemployed persons also fall in this category.

What are the points raised against the state’s vaccination policy?

- The common case of the Intervenor is that the above sub-classification is beyond the constitutional mandate and is patently in violation of the law of equality and the equal opportunity before law, besides discriminating citizens with reference to their right to life.
- According to former MLA Amit Jogi, the decision is not based on science and is completely arbitrary. “The entire world is following the concept of triage, to provide vaccines to those who are vulnerable and have comorbidities. The decision of the state government is not only unscientific but also against the constitution,” Jogi said.
- Another intervener advocate Kishore Bhaduri, who applied along with his son Sabyasachi Bhaduri, in his application, stated that despite registering through the union government’s Cowin application, they were denied vaccination.
- “The department has arbitrarily introduced class/income-based classification for administering the vaccine. The said classification has no nexus with the object sought to be achieved by implementing the same,” his application read.
- Citing right to life and right to uniform access to health care, Bhaduri prayed that the state’s decision of sub-classification be quashed.

What were the High Court’s objections to the state’s policy?

- The High Court Bench of Chief Justice PR Ramachandra Menon and Justice PP Sahu, while listening to the interveners, discounted their proposal of first come, first serve for the vaccination.
- The court, commenting on the hardships faced by the poorest of the poor, regarding lack of awareness, education, access to internet, smart phone said that even registration for the vaccine is difficult for the poor, “virtually making it detrimental to the right and interest of the children of the lesser God.”
- It further added, “if any steps are taken by the State Government to have the benefit extended to such people as well, the object cannot be doubted.
- But, such step has necessarily to be in conformity with the constitutional mandate and in tune with the guidelines issued by the Central Government at the national level. Prima facie, sub-classification with reference to the ‘financial status’ alone as now may not be correct or sustainable.”
- The bench also commented that “absolutely no reference has been made (in the circular issued on April 30) therein to ‘policy decision’ (if any) taken by the Government. Policy of the Government has to be on the basis of deliberation in the Cabinet”.

What are the questions raised by the High Court on the state’s vaccination policy?

- The High Court Bench raised six questions in their order dated May 4.



- The bench asked if the state had any power to tinker with the central government vaccination policy, if yes, can it be regarded as a 'policy decision'.
- The bench also enquired about the legality of the sub classification. Commenting on the spread of the second wave, the court asked if it would be prudent to procure more vaccines and administer them at the earliest, and asked the government to relook the policy for the third face.
- "If any priority is to be given for vaccination by effecting sub-classification, is it not necessary to have it with reference to the areas where maximum spread of the disease is located or with reference to the population or the chance to get infected more or with reference to any particular place or area or group where more vulnerable people work/reside and the chance to get infected?" the bench asked.

What did the state say in this matter?

- The Advocate General submitted that there was a serious lapse on the part of the central government which did not provide the state with enough vaccines, necessitating a sub-classification.
- "Particularly since the Antyodaya Group who are residing mostly in the remote areas and who are rather illiterate or not knowing anything much about the Covid-19 pandemic, symptoms, complications, necessity to register in the portal and as to the infrastructure, are moving around quite freely which spreads the disease much faster.
- The case is almost similar in the case of the Below Poverty Line group as well and hence, there is a rationale in the sub-classification of persons in the age group of 18 to 44."

What did the High Court ask the state to do next?

- The High Court posted the matter for further consideration on May 7, after asking the state to fix a reasonable ratio of allotment of vaccines.
- The order stated, "a Scheme has to be formulated by the State by earmarking appropriate share of the vaccines to them as well and set up 'Help Desks' providing spot registration and to administer vaccines to them, without compromising the right of the other segments who are entitled to have equal treatment with regard to the right to life.
- In the said circumstance, as a viable approach, we are of the view that the State Government shall fix a reasonable ratio of allotment of vaccines to the 'Antyodaya Group', the persons belonging to the 'Below Poverty Line' and the persons belonging to the 'Above Poverty Line', with reference to all the relevant aspects including the vulnerability, chance to spread the disease and the number of eligible persons in the group.
- Accordingly, we direct the State Government to have a discussion of the Secretaries of the relevant Departments at the higher level and to fix the ratio as above and distribute the vaccines in the third phase of vaccination (for the age group of above 18 and below 45 years) in an equitable manner".