

## COVID-19 third wave in India

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The preparations and plans of the New Year 2022 celebration of Indians were disrupted by an unwelcome guest, COVID-19, the third wave. Though we cannot say, it was uninvited and unexpected. Experts expected it, and we sent multiple invitations to Delta and Omicron by frequently forgetting COVID appropriate behavior.

### Living with COVID for two years

World Health Organization (WHO) declared the novel coronavirus as an outbreak of public health emergency of international concern on 30<sup>th</sup> January 2020. There were 98 cases and no deaths in 18 countries outside China at that time. On 11<sup>th</sup> February 2020, WHO announced that the disease caused by the novel coronavirus would be named as COVID-19 (Coronavirus disease 2019) and declared as a pandemic on 11<sup>th</sup> March 2020. Since then, we have been witnessing the impact of COVID-19 on the health system, economy, and social/cultural life of the community at global and local levels. During the first and second waves, India faced many challenges in the last two years. The COVID warriors did their duty 24x7, undeterred by the lack of personal protective equipment, masks, ventilators, etc. There was an acute shortage of medicines, hospital beds, and oxygen supply for COVID 19 patients across the country.

### So, where are we now?

As per WHO data till 31<sup>st</sup> December 2021, there have been 288,548,655 confirmed cases of COVID-19, including 5,453,460 deaths; India has 34,861,579 confirmed cases, inclusive of 481,486 deaths as of 31<sup>st</sup> December 2021<sup>(1)</sup>. The weekly global number of new cases increased by 11% compared to the previous week, while the number of recent deaths remained similar to the number reported in the last week<sup>(2)</sup>. In India, Maharashtra, Delhi, West Bengal, Gujarat, Karnataka, Tamil Nadu have reported a huge surge in COVID-19 cases.

### COVID-19 variants; what is new? OMICRON

All viruses, including Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)/ COVID-19, change over time. Most of the changes have little to no impact on the virus' properties. However, few changes may affect the virus's properties, like spread of the disease, severity of the disease, or the efficacy of vaccines. Multiple variants of SARS-CoV-2 have been documented in the world throughout this pandemic, e.g., Alpha, Beta, Gamma, Delta, etc. But currently, two variants, Delta (B.1.617.2 and AY lineages)

and Omicron (B.1.1.529 and BA lineages), bother much. The latter was first identified in South Africa on 24<sup>th</sup> November 2021. This variant has attracted attention as it has adopted more than 30 changes to the spike protein<sup>(3)</sup>. These number of mutations in Omicron have been associated with increased infectivity and/or immune evasion and the sudden rise in several positive cases in South Africa, the United States of America, and most European countries. World Health Organization has designated Omicron as a Variant of Concern (VoC) on 26<sup>th</sup> November 2021, based on advice from WHO's Technical Advisory Group on Virus Evolution.

### Are we ready to face the third wave due to Delta and OMICRON? Challenges

#### Vaccination status in India

Vaccination status in India is affected by multiple factors. The media's role, particularly social media, has been very crucial both in sensitization of people and spreading/curtailing misconceptions about vaccines. COVID vaccination in India commenced in Jan 2021 with vaccination to all Health Care Workers. The program initiated with vaccination of Front-Line Workers, and elderly above 60 years of age first, and then gradually expanded to include citizens above 45 years of age, and then adult citizens above 18 years of age. To increase the pace of vaccination, participation of private hospitals was also allowed at a prescribed charge.

Keeping in view the recent global surge of COVID-19 cases, the government has refined guidelines of COVID-19 vaccination<sup>(4)</sup>.

1. COVID-19 vaccination of children aged 15-18 years to be started from 3<sup>rd</sup> January 2022.
2. The Health Care Workers (HCWs) & Front-Line Workers (FLWs) who have received two doses, another dose of COVID-19 vaccine would be provided from 10<sup>th</sup> January 2022.
3. All persons aged 60 years and above with comorbidities, who have received two doses of COVID-19 vaccine, will (on Doctor's advice) be provided with a precaution dose (term used by the government for booster) from 10<sup>th</sup> January 2022. The total number of vaccinated in India as of 31<sup>st</sup> December 2021 is 1,44,54,16,714.

We need to sensitize people about the advantages of the vaccine. Mass media like television can play a proactive role in creating awareness about the vaccine and giving correct information. No vaccine is 100% effective. The present

vaccines may not protect against COVID-19 infection, but it prevents severe disease and mortality. It is frustrating when we come across a media report or WhatsApp message, 'despite two doses of vaccine,' 'how can some celebrity or well-known person get COVID-19 infection?' The vaccinated people should also understand the importance of following COVID appropriate behavior after vaccination.

### Promising new treatments

Molnupiravir<sup>(5,6,7)</sup>, Nirmatrelvir plus Ritonavir<sup>(7,8)</sup>, and injectable antibody drugs Bamlanivimab plus Etesevimab<sup>(9)</sup>

As per the expert prediction, the third wave will have mild cases and less hospitalization in the vaccinated group. But we do not know about the clinical presentation in an unvaccinated group. Considering vaccination coverage, many patients will be treated on an OPD basis in the near future. The new oral antiviral drug cleared by Indian authorities, Molnupiravir, will be prescribed to these patients for use in mild cases. The problems in such scenarios could be compliance, inadequate dosage/duration of treatment leading to resistance, delay in hospitalization due to a false sense of security. For the injectable drug, the cost is the limiting factor.

### Delay in National eligibility cum entrance test (NEET) post-graduate (PG) counseling

NEET PG counseling is delayed for months as the matter is pending in Supreme Court. Recently it has been announced that Supreme Court will hear the case on 6<sup>th</sup> January 2022. The contribution of post-graduate residents in the management of critical COVID patients in tertiary care COVID centers has been crucial in the last two waves. One-third of PG students appeared for the PG exam in May-June 2021. As of now, only two-thirds of PG students are working. It will be extremely challenging to provide critical care to COVID patients without enough PG students to support the health system.

### New complications

We have seen complications like thromboembolic events, new-onset diabetes, and fungal infections during the last two waves. Patients also suffered from long COVID. We should be vigilant during the third wave for prevention/early diagnosis/treatment of known complications and monitor patients for possible new complications.

### Resistance from people for COVID appropriate behavior

Even after two waves of COVID - 19 people have not learned to follow COVID appropriate behavior. It will be an arduous task to convince/motivate people to do it all the time.

As I am writing this editorial, there is already news of death due to Omicron in India.

### So

I hope we will be able to take care of COVID patients during the third wave.

I hope people understand the significance of vaccines.

I hope people realize the importance of COVID appropriate behavior.

I hope human immunity and COVID 19 decide to have a symbiotic relationship in 2022.

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