

EDITORIAL

Omicron: The new variant of concern needs preparedness, not panic**Surekha Kishore, U Venkatesh**

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SARS-CoV-2 continues to be a Public Health Emergency of International Concern. On November 26, the World Health Organization (WHO) labeled the omicron type as a covid-19 variant of concern, prompting travel restrictions, a rush to accelerate booster immunization programmes, and new attempts to address vaccination disparities. According to the WHO, omicron is a "very high" concern throughout the world, and preliminary research indicates that it may be a more transmissible type, leading to infection surges (1,2). The Indian government keeps a close eye on the issue and gives appropriate guidelines as needed.

Omicron threat will depend on its transmissibility, Virulence, and capacity to evade immunity in those previously vaccinated or infected. Even if the disease is milder, the rapid onslaught of the virus could overwhelm health care systems (doubling time of 2.5 days means 50X increase in 2 weeks) (3). We should ensure mitigation plans are in place to maintain essential health services and that necessary resources are in place to respond to potential surges.

Ear to the ground

Maintaining trust and credibility by proactively communicating with the population what is known, what is unknown, and what responsible authorities are doing to mitigate risk is one of the most critical and successful actions in public health response to any event. Listening to community perspectives using online or offline means, socio-behavioral surveys, and interpreting the data, are critical steps in developing effective communication and engagement solutions. To allow for the delivery of a tailored communication package, and information

monitoring system should be in place to catch developing patterns.

Perform studies to improve understanding of transmission parameters, vaccine effectiveness, severity, the effectiveness of public health and social measures (PHSM) against Omicron, diagnostic methods, immune responses, antibody neutralization, population risk perception, knowledge, attitude, and behavior toward PHSM, vaccines and tests, or other relevant characteristics where capacity exists and in coordination with the international community. We should continue to take targeted samples of certain groups for sequencing, as described in the variant recommendations for SAR-CoV-2 variant surveillance. Indicators of the severity of illness and pressure on healthcare systems (such as bed occupancy in general wards and intensive care units and healthcare worker exposure and burnout) must also be monitored.

Strengthen testing capabilities

The RT-PCR technique is the most widely acknowledged and utilized diagnostic approach for SARS-CoV2 Variant. To demonstrate the existence of the virus, this approach looks for certain genes in the virus, such as Spike (S), Enveloped (E), and Nucleocapsid (N), among others. However, because the S gene has been highly altered in Omicron, several primers may provide findings showing the lack of the S gene (S gene drop out). Omicron's S gene dropout and other viral genes might be recognized as diagnostic characteristics. To validate the omicron variation, however, genetic sequencing is necessary. WHO advises that national testing capacity and genome sequencing capabilities be adequately anticipated for any increases in testing demand from domestic and

international visitors. SARS-CoV-2 testing must be connected to public health efforts to provide proper clinical and supportive treatment and contact tracing operations. (4-7)

Evidence on evading immunity

Preliminary evidence from epidemiological, modelling and laboratory studies suggests that humoral immunity is less protective against infection by Omicron than against other variants. A study in South Africa showed that the likelihood of reinfection with Omicron was higher than what would have been expected with previous variants, and early findings from unpublished modelling studies (personal communication), also suggest that some level of immune evasion against infection is likely. Similar findings have also been found in a recent analysis on data from England, United Kingdom, where the risk of reinfection with Omicron was estimated to be 5.41 (95% CI: 4.87-6.00) fold higher than for Delta. A study in the United Kingdom reported a reduction in neutralization titres in individuals vaccinated with 2 doses of either Pfizer BioNTech-Comirnaty or AstraZeneca-Vaxzevria vaccine at day 28 post second dose, suggesting an increased risk for breakthrough infections due to circulating Omicron, and in line with early vaccine effectiveness estimates from England (8)

Intensify Vaccination

While no evidence existing vaccines do not respond to Omicron, some of the mutations in the Spike gene that have been described may reduce the effectiveness of existing vaccines. Public health authorities should step up their efforts to increase COVID-19 vaccination coverage in all eligible groups, focusing on those at high risk of severe illness who are still unvaccinated or haven't been fully vaccinated. These people include the elderly, healthcare workers, and individuals with underlying diseases that put them in danger of serious illness and death. Vaccines are expected to have efficacy against Omicron, especially for severe illness, even if performance is lower than other types. Antibody-mediated protection, particularly protection directed at the spike protein, may put Omicron at risk of immune evasion. Immune evasion from cell-mediated immunity, on the other hand, is more difficult to anticipate. Despite the unknowns, it is fair to believe that currently, existing vaccinations protect against Omicron, especially against severe disease and mortality. (8)

The risk-based travel measures

Following the IHR and WHO guidelines, we should continue to use an evidence-based and risk-based approach when adopting international travel measures. All travelers should be aware of the signs and symptoms of COVID-19, be vaccinated when the time comes, and follow all public health and social measures. Blanket travel restrictions will not stop the spread of the disease internationally, and they will put a great strain on people's

lives and businesses. Furthermore, they can potentially undermine global health efforts during a pandemic by discouraging countries from reporting and sharing epidemiological and sequencing data. National authorities may utilize a multi-layered risk mitigation technique, such as entry/exit screening, testing, or quarantine of travelers, to potentially postpone the exportation or importation of the new variation. These measures should be based on a risk assessment procedure and be proportionate to the risk; they should also be time-limited and administered with respect for the dignity of travelers. (9)

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