World Health Organization

What evidence do we have that omicron is evading immunity and what are the implications?
Meeting objectives

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R&DBlueprint
Powering research
to prevent epidemics

Now that the omicron variant has been detected in many countries:

Assessment of the threat will depend on its:

- Transmissibility
- Virulence
- Capacity for evading immunity in those previously vaccinated or infected

Key decisions will need to be made:

- What are the implications for vaccine development, vaccine evaluation, and vaccine deployment?

Assessment of the threat and decision-making will depend on results of research

- What needs to be done to facilitate the global response?

Key knowledge gaps (from December 6 meeting)

Specific information about omicron variant- transmissibility, virulence, adaptive immune avoidance for various vaccines

Omicron exposed gaps in global seroepidemiology

Still need more information on best vaccine regimens

New vaccines might be needed, and manufacturers are getting started. This is easier for mRNA and vectored vaccines. This will also require at least some new assays.

Standardization of assays is critical

Other research needs: original antigenic sin, role of T cells in severe disease, more broadly protective vaccines, improved effectiveness studies (e.g., operational research during deployment), vaccine effectiveness against severe disease

In all decisions, consider likely consequences among the unvaccinated, the previously infected, and the vaccinated. Global access to vaccines is critical.

Data on omicron variant continue to emerge

Epidemiology

Clinical course

Immunology

Vaccine induced immunity

- neutralizing antibody responses
- protection

Even if disease is milder, rapid spread of omicron has the potential to overcome other responses and to saturate health care systems

These data are rapidly emerging and are critically important but have not yet been peer reviewed

Goals of the meeting

Present and review the available evidence

Critically appraise the data

Outline research and other priorities for omicron variant response