ASEAN Dx Preparedness Webinar Series

Vaccines and Immunity: Is Omicron the last threat?

11th Feb 2022

2pm-3:30pm (PHT/ SGT)
1pm-2:30pm (JKT)

Organised by ASEAN Dx Initiative

1293 Participants

23 Countries

BN, CV, GB, HK, IN, ID, JP, KH, KR, KW, MM, MY, NL, NP, PH, QA, SG, TH, TR, TW, UG, US, VN

92% From ASEAN

Highlights from the webinar

- In an emerging infectious disease such as COVID-19, there can be three ways to look at the infectious agent: known-knowns, known-unknowns and the unknown-unknowns. As the SARS-CoV-2 original strain and variants share >80% sequence similarity with SARS-CoV-1, the causative agent of SARS in 2003, they are all known-unknowns. In theory, we should be able to do much better with known-unknown infectious agents.
- The SARS-CoV-2 virus and its multiple variants of concerns have demonstrated the ability of this virus to escape protection against infection or reinfection achieved from prior infection or vaccination. This phenomenon is known as 'immune escape', but it does not presently occur for the protection provided by vaccines that prevents serious illness in the majority of those infected after vaccination.
- Due to immune escape of the SARS-CoV-2 virus, vaccines development will continue to evolve. The current vaccines are 1st generation based on the original strain. The companies are working on 2nd generation targeting the VOCs, and the scientific community is studying the feasibility of 3rd generation pan-sarbecovirus vaccine. The ultimate goal would be a pan-coronavirus vaccine.
- Herd immunity that decreases transmission to very low levels is when a large portion of a community is protected against infection after vaccination or against reinfection after naturally acquired infection. Due to immune escape, we are still seeing large numbers of breakthrough infection after vaccination and re-infection of those who have previously been infected and not vaccinated. A better approach to monitor the epidemiology of COVID-19 is through population immunity.
- Population immunity is measured by testing antibodies level and is defined as the percentage of population that has had an immune response. A strong population immunity currently is thought to protect the majority of the population from severe disease or death. For example, the percentage of adults tested positive for antibodies is estimated to be approximately 98% in the United Kingdom.
- Although the current vaccines do not prevent infection from SARS-CoV-2, they remain the main defense against severe manifestation of disease; booster shots are important in view of antibody waning.
- When governments shift the responsibility from government to personal risk assessment and management (like self testing), they have adopted control measures that move from pandemic to endemic control.
- We do not yet know if Omicron variant is the last threat. It clearly is more capable than expected or predicted in escaping the neutralising antibody mediated protection against infection after vaccination.
- Every outbreak needs a trusted face. Trust can be built by government investments in risk communication and community engagement to boost the confidence of individuals in public health guidance such as testing and vaccination programmes.
- Program for Research in Epidemic Preparedness And Response (PREPARE) is established by the Singapore government with an objective to build up the capability platforms expertise during peacetime, so that we can be ready to face a pandemic. Please connect with PREPARE head office for collaboration opportunities.

Speaker and Panellist:
Prof David Heymann – Professor, Infectious Disease Epidemiology, London School of Hygiene and Tropical Medicine (LSHTM) United Kingdom

Chair and Moderator:
Prof Wang Linfa – Professor, Programme in Emerging Infectious Diseases, Duke-NUS Medical School, Executive Director, PREPARE, Singapore

ASEAN Dx Initiative Co-chairs:
- Dr Sidney Yee – CEO, DxD Hub, Singapore
- Dr Jaime Montoya – Executive Director, PCHRD, Philippines

Poll Results (848 votes)

Top three topics of interest for future webinars:
- 63% interested in Anti-viral Drugs for COVID-19 for the next webinar
- 56% voted for Evolution of COVID-19 Vaccines
- 51% voted for Care Pathways Post-diagnosis of COVID-19

Top three topics of interests for **future webinars not related to COVID-19:**
- 60% interested in Antimicrobial Resistance
- 57% voted for Global efforts on increasing diagnostics access in countries
- 43% voted for Neurodegenerative Diseases

Watch the webinar:
https://youtu.be/shrv8sKelyE

Organised by: ASEAN Dx INITIATIVE

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