

Vaccines and Immunity: When can we achieve herd immunity?



8th Oct 2021



9:30am-11am (PHT/ SGT)
8:30am-10am (JKT)

Organised by ASEAN Dx Initiative

Speakers and Panelists:

- **Prof Wang Linfa** - Professor, Programme in Emerging Infectious Diseases, Duke-NUS Medical School, Singapore
- **Dr Kristine Dela Cruz** - Paediatrics, Infectious Diseases, Research Institute for Tropical Medicine, Philippines
- **Dr Safarina Malik** - Head, Laboratory, Eijkman Institute, Indonesia
- **Assoc Prof Chan Yoke Fun** - Medical Microbiology, University of Malaya, Malaysia

- **Dr Watsamon Jantarabenjaku** - Infectious Diseases Paediatrician, King Chulalongkorn Memorial Hospital, Thailand
- **Assoc Prof Tan Le Van** - Head, Emerging Infections, Oxford University Clinical Research Unit, Vietnam

Chair and Moderator:

Dr Benedict Yan - Pathologist and Director, Molecular Diagnostics Centre, National University Health Systems, Singapore



427

Participants



21

Countries

AI, AU, BN, EG, GD, GB, ID, IN, KH, KR, KZ, LA, MM, MY, PH, SG, TH, TT, TW, US, VN



85%

From ASEAN



Highlights from the webinar

- The purpose of the ASEAN sero-surveillance study is to determine the state of immunity of people in the ASEAN region before and after vaccination, monitor the rate of seroconversion of neutralizing antibodies, evaluate the half life of the vaccines post vaccination and provide data on breakthrough infections.
- Neutralizing antibodies produced in our body either by vaccination or through COVID-19 infection are highly specific to the viral strain, and on an average, can last from 35 days to 39 years in most individuals, as per findings by multiplex sVNT (surrogate virus neutralization test). Thus, COVID-19 immunity varies a lot.
- For Delta variant, the estimated R_0 (reproduction number) is between 5 and 9, which works out to a herd-immunity threshold of 80–89% of the population.

Indonesia	Malaysia	Philippines	Singapore	Thailand	Vietnam
>20% FV* Mostly in big cities in Java Island	>70% FV	>20% FV Mostly in the National Capital Region	>80% FV	>50% FV	>70% FV in HCMC
Sinovac Sinopharm AstraZeneca Pfizer Moderna	Sinovac Cansino AstraZeneca Pfizer	Sinovac AstraZeneca	Pfizer Moderna Sinovac	Sinovac Sinopharm AstraZeneca Pfizer	AstraZeneca Pfizer Moderna Sputnik V Sinopharm Abdala Hayat-Vax Janssen

*FV - Fully vaccinated

- The current generation vaccines were developed against the original D614G strain. Data shows they are effective in preventing death and severe disease.
- Analysis of variants obtained from saturating mutagenesis of Receptor Binding Domain (RBD) of SARS virus has allowed identification of structurally constrained regions that cannot be changed. Determining broad neutralizing epitopes in this structurally constrained region can pave a way for pan-sarbecovirus vaccine.
- Pan-sarbecovirus vaccine strategy can help exit COVID-19 and prevent infection by upcoming SARS-CoV-3, for which South-East Asia is a hot spot.
- In order to be ready for the next pandemic or Disease X, we should not only learn from what we are doing today but also allow for a degree of uncertainty, a degree of the unknown unknowns so that we can cover some of the other possibilities, the pandemic or Disease X might take.



Poll Results (210 votes)

- **Top three topics** of interest for future webinars
 - 67% interested in **Vaccine Boosters** for the next webinar
 - 62% voted for **Living with Endemic COVID-19**
 - 52% voted for **Vaccines and Breakthrough infections**
- **Top three topics** of interests for **Diagnostics Capacity Training** in the region
 - 67% interested in **Diagnostics Solution Development**
 - 46% voted for **Clinical Laboratory Operations**
 - 37% voted for **IVD regulations in ASEAN**

Watch the webinar:

<https://youtu.be/awBi4iTA1Cg>