

FOR IMMEDIATE REPORTING

STUDY BASED ON LOCAL DATA REAFFIRMS THAT MRNA VACCINES OFFER BETTER PROTECTION AGAINST COVID-19

A recent study based on local data by National Centre for Infectious Diseases (NCID) and the Ministry of Health's (MOH) COVID-19 Data Management and Analytics Team found that individuals who received two doses of the Sinovac-CoronaVac COVID-19 vaccine were observed to have lower protection against severe disease from infection with the Delta variant compared to those who received two doses of Pfizer-BioNTech/Comirnaty or Moderna mRNA vaccine. This supports the need for three doses of Sinovac-Coronavac vaccine as a primary series.

Key Findings

2. The study period was from 1 October 2021 to 21 November 2021 and covered 1.25 million individuals. The persons in the study cohort were those aged 40 years and above, who received two doses of the vaccines under the National Vaccination Programme. The analysis accounted for differences in age, gender, race, housing type and the daily differences in infection rate.
3. Based on analysis of local data, the effectiveness of two doses of the Sinovac-CoronaVac vaccine was 60% against severe disease, lower than that of Pfizer-BioNTech/Comirnaty or Moderna mRNA vaccines which were 90% and 97% respectively.
4. These results support the need for three doses of Sinovac-CoronaVac vaccines as a primary series to attain better protection against severe disease, defined as requiring oxygen, intensive care unit (ICU) care and death due to COVID-19.

Boosters Recommended for Maximum Protection

5. As persons who have received two doses of the Sinovac-CoronaVac vaccine were observed to have lower protection against severe disease, they are recommended to receive a dose of a Pandemic Special Access Route-authorised mRNA vaccine as a third dose of their primary vaccination series. Otherwise, they should complete their primary series with a third dose of the Sinovac-CoronaVac.
6. This recommendation is also substantiated by international findings. Based on preliminary data from Chile, persons who received the Pfizer-BioNTech/Comirnaty vaccine as the third dose after two doses of the Sinovac-CoronaVac vaccine had a 95% reduction in the risks of infection. In contrast, the risk reduction in persons who received Sinovac-CoronaVac as the third dose was 71%. The antibody rise was also observed to be around 27 times higher when the Pfizer-BioNTech/Comirnaty vaccine was received as the third dose compared to if Sinovac-CoronaVac vaccine was received.

7. All eligible persons will be able to receive their booster doses of the mRNA vaccine five months after completing their primary vaccination series. We will continue to monitor the vaccine effectiveness of the mRNA and non-mRNA vaccines, including how they are enhanced by a third dose or a booster dose. In the meantime, all persons who are eligible for their boosters should get boosted when it is offered to them.

**NATIONAL CENTRE FOR INFECTIOUS DISEASES
MINISTRY OF HEALTH'S COVID-19 DATA MANAGEMENT AND ANALYTICS
TEAM
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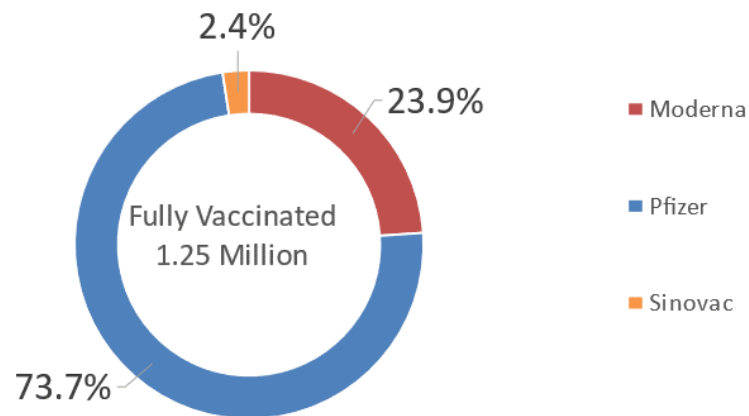
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ANNEX

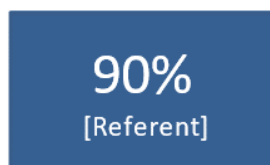
Characteristics of the Cohort (n=1.25 million)

Category	Number
Number of fully vaccinated individuals	1.25 million
COVID-19 cases	62,900
Severe COVID-19	1,710

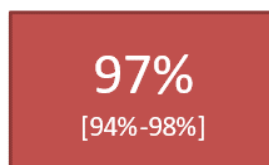
Figure: Breakdown of fully vaccinated persons in study



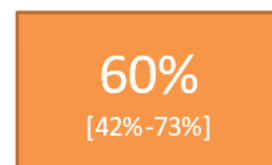
Estimated Protection Against Severe Disease



Pfizer-BioNTech /
Comirnaty



Moderna



Sinovac-CoronaVac

If there are **100** severe cases every 100,000 unvaccinated individuals,
> there are 10 severe cases amongst 100,000 individuals receiving 2 doses of Pfizer
> there are 3 severe cases amongst 100,000 individuals receiving 2 doses of Moderna
> and there are 40 severe cases amongst 100,000 individuals receiving 2 doses of Sinovac