

# GUANGZHOU'S REAL-WORLD STUDY SHOWS SINOVAC IS EFFECTIVE AGAINST DELTA VARIANT

By Dr Ajit Pal Singh

A recent research on the effectiveness of two doses severe acute respiratory syndrome Coronavirus 2 (SARS-CoV-2) for COVID-19 vaccine conducted in Guangzhou, China is proven effective as it provides sufficient protection against the deadly spread of the Delta variant worldwide.

Guangzhou Center for Disease Control and Prevention Chinese epidemiologist lead researcher Zhong Nanshan found that two shots of the vaccines provided an efficacy of 59% (6 out of 10 patients) against COVID-19 caused by the Delta variant, 70.2% (7 out of 10 patients) against a moderate form of the disease and 100% against severe cases.

This implies that the vaccine was more effective against moderate COVID-19 than mild COVID-19. In this regard, the research also exceeded the threshold decided by the World Health Organisation to reach the standard that any vaccine for SARS-CoV-2 must achieve the efficacy of 50%.

The research polled data from 628 participants, including 153 COVID-19 patients caused by the Delta variants and 475 close contacts cases in the city. The patients were 18 to 59 years old. Of them, 10 had critical symptoms, 6 had severe symptoms, 105 had moderate symptoms, and 32 had mild symptoms.

Two inactivated vaccines, CoronaVac manufactured by Sinovac Biotech Ltd. and the China National Biotec Group SARS-CoV-2 vaccine, were chosen by researchers to measure the effectiveness against the Delta strain among the patients.

The vaccines' effectiveness was determined using a test-negative case-control design, a popular method for evaluating vaccine efficacy. It has also been adopted for mass vaccination within mainland China.

The severity or mildness of the COVID-19 symptoms was categorised based on the observation in patients. Those without any external signs were classified as mild COVID-19 patients; however, those with respiratory symptoms such as fever and imaging characteristics of pneumonia were grouped as moderate COVID-19 patients.

Patients with oxygenation index <300 mmHg, resting oxygen saturation <93%, and respiratory rate >30/min were categorised as severe. Those experiencing respiratory failure and requiring mechanical ventilation, shock or other organ failure requiring admission to the ICU were classified as critical COVID-19 patients.

The research also revealed that those patients vaccinated with a single vaccine dose also showed some degree of protection against the COVID-19 disease. The vaccine's effectiveness of a single dose was 13.8%. The study found that none of the 16 cases with critical and severe COVID-19 has been vaccinated with SARS-CoV-2 vaccines.

In the same research, the scientists have also discovered that the vaccine effectiveness was higher in females and people in the age group of 40-59 (with an efficacy rate of 72.5%) compared to males and those with moderate COVID-19. This shows the need to further strengthen vaccination of females and the elderly in the continuing vaccination programme.

In light of this research, countries that are facing severe shortage of COVID-19 vaccines especially are able to use this research-backed information to make vaccine policies, which may require double dose vaccination coverage in advance as this would prioritise unaffected individuals before another outbreak occurs.

***This article is written by Dr Ajit Pal Singh Raina, Vaccine Specialist of Pharmaniaga Berhad. He is medical doctor by training with a postgraduate degree in Public Health and Doctoral degree in Infectious Disease Epidemiology with over 20 years of experience in the Biopharmaceuticals industry, especially vaccines. To date, Dr Ajit has conducted numerous clinical studies for in Asia, Africa and South America; resulting in vaccines Prequalification/approvals from WHO. He has multiple vaccine publications in reputed Journals such as Lancet, NEJM and Human Vaccines.***