A glimpse into global vaccine race

First is not always best – adequate testing ensures safety and efficacy

Jenine Toh

The rapid progress of the front runners in the global vaccine race has raised questions on whether the first to arrive will necessarily win. On August 18, the University of Oxford and AstraZeneca announced encouraging results from their clinical trials in UK volunteers, sparking hope that a vaccine may be on the horizon. The University of Oxford’s chief investigator, Adrian Hill, said the team had had a “lightning-fast” response to COVID-19 and had already started producing a vaccine using a mosquito vector.

However, the focus to come up with a vaccine is on the global race, rather than being too fast. The Oxford team’s approach will take more time and cost but may allow better safety monitoring for the vaccine.

It has been clear for months that the COVID-19 pandemic is not going to be contained by a single vaccine. In fact, the World Health Organization has already said that it is unlikely to see a single vaccine that will work for all countries.

Professor Yung Leong Yoon, deputy director of the Duke-NUS Medical School’s emerging infectious diseases programme, said there are about 40 vaccine candidates in clinical trials.

He said: “The problem is not whether we are going to have a vaccine but how soon that vaccine will be available and how many vaccines will be needed. The key is to have multiple vaccines and to have a strategy to deliver them to different parts of the world.”

Tough choices

Various factors will need to be considered when choosing which vaccines to use, including safety, efficacy, manufacturing capacity, cost and delivery. One of the tough decisions will be whether to use a vaccine that is highly effective but takes longer to develop or one that is less effective but is available sooner.

One of the biggest challenges is how to ensure equitable access to vaccines for all countries, said Dr Yoon.

The Oxford team is working with several governments and organizations to ensure that the vaccine is available to all countries.

Professor Yung said: “We need to make sure that the vaccine is accessible to all countries, and we need to make sure that the vaccine is affordable.”

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