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Global Health Security COVID-19 & Its Impacts

The US Case: What Can We Learn From It?

By Cung Vu

SYNOPSIS

For almost two years, more than 200 million people worldwide have been infected with COVID-19 resulting in more than 4.5 million deaths. The US has been playing a critical role in addressing the pandemic. What could one learn from its successes and challenges?

COMMENTARY

WHILE DEVELOPED countries are trying to re-open borders to resume global activities, developing countries are still struggling to control their fatality rates due to unavailability of vaccines. What are the successes and challenges one could learn from the United States, where more than 40 million people have been infected so far, with more than 650,000 deaths?

Successes

Vaccine development: The US vaccines approved to date either as fully authorised or for emergency use only are Pfizer-BioNTech, Moderna and Johnson & Johnson. Both Pfizer and Moderna vaccines are based on m-RNA which teaches the immune system to prevent infection from the COVID-19. The Johnson & Johnson vaccine teaches the immune system to attack the protein that causes the COVID-19 to infect other cells.

Normally, vaccine development takes a long time -- about 10-15 years. Pfizer and

Moderna were able to use old technology for new applications, by leveraging on the m-RNA research taken a few decades ago to develop the COVID-19 vaccine.

Government support: At the onset of the pandemic, the Trump administration was able to speed up the logistics to design, build and distribute ventilators and personal protection equipment to reduce the death rate of COVID-19 patients. It also pumped in money to invest and/or to order in advance a number of vaccines being developed such that if and when it worked, vaccines could be produced in a short time and in large quantities for the US.

As Pfizer and Moderna vaccines were approved for emergency use only in January 2021, the Biden administration was successful in delivering the vaccines to the people. This requires coordinated efforts from the federal government and states to the local authorities to work out the most practical ways to vaccinate people from mass vaccination sites, hospitals, pharmacies and so on.

It was so successful such that by the beginning of summer 2021 the US had one of the highest vaccination rates worldwide only behind Israel and the United Kingdom.

Challenges

Follow the science or not: COVID-19 vaccines protect people from getting infected, severely ill, and significantly reduce the death rate. However, since vaccines are not 100% effective at preventing infection, fully vaccinated people could still get COVID-19, but are less likely to develop serious illness than those who are unvaccinated.

Even with the abundance of vaccines in the US, unfortunately, as of now only 176 million people or 53.6% of the population is fully vaccinated. It means approximately 90 million are eligible but decided not to. This provides a breeding ground for the virus to potentially mutate to become new variants. The new variant could be benign or become more contagious and virulent.

The infection and death rates have been increasing since the middle of June 2021. This creates problems for patients who need hospitalisation especially the Intensive Care Unit (ICU). In some states, most of the ICU beds are occupied by the unvaccinated COVID-19 patients thus denying those with other critical diseases.

Freedom and individualism: Whether people agree that public safety should have a higher priority than individual rights or not, in the US, individual freedom has always been one of the country's key foundations. It allows activities that people in other countries find hard to understand. For instance in Texas one can carry a handgun without a permit or in New Hampshire one can ride a motorcycle without a helmet where the state official motto is "Live Free or Die".

Because of this culture of freedom, it is very difficult if not possible to mandate, enforce vaccination or mask wearing in public. The legal system is complex where the local authority can challenge the state and the state can challenge the federal government.

Misinformation: This is a very serious problem in the US as it creates mistrust. It is very difficult to control misinformation, especially from politicians, public figures, media

networks, who are out to serve their own interests. There is a lot of totally incorrect information about the disease prevention and treatment of COVID-19, therefore reducing the effectiveness of the pandemic management.

Politics: It is undeniable that US politics play a very critical part in addressing the COVID-19 pandemic, with voters deeply polarised. The Democratic Party followers tend to favour mask wearing and vaccination; the Republican Party followers tend to play down the seriousness of the COVID-19.

Incentives: Even with monetary rewards and other incentives, the vaccination rate only achieved a moderate success since those they try to persuade have already been vaccinated.

Learning to Live with COVID-19

Since no single country can solve the pandemic, the Biden administration has restored the US' relationship with the World Health Organisation (WHO) so as to coordinate a global response to the pandemic. It also contributed US\$4 billion to COVAX, the vaccine alliance whose mission is to distribute COVID-19 vaccines to low- and middle-income countries.

By August 2021 the US has shipped 110 million COVID-19 vaccine doses to 65 countries with no strings attached. The US has expanded the number of Centres for Disease Control and Prevention (CDC)'s regional offices to gain first-hand knowledge, including an office in Hanoi in August 2021 to cover Southeast Asia.

The Biden administration is pushing for future preparedness in dealing with potential pandemic with a \$65 billion proposal in September 2021 to accelerate vaccine development, testing, production, and early warning systems.

What Next: Lessons to Be Learned

In monitoring what happens in the US, one could draw some lessons:

- old technology could have new applications;
- vaccine distribution is a hands-on operation that involves all parties;
- misinformation creates mistrust which must be controlled to have an effective pandemic management;
- trust is very critical and that is the main reason why the US has so many unvaccinated people;
- achieving global vaccination as quickly as possible is important since the more contagious variant could originate from anywhere such as the Delta variant from India and the Gamma variant from Brazil;
- early warning is critical to minimise the virus spreading early.

The flu virus keeps on mutating and it seems that people now have accepted it as a fact of life to have a flu shot annually. The WHO estimates that annually one billion people worldwide get the flu and 290,000 to 650,000 die.

Almost certainly, the COVID-19 will not go away. What are the number of deaths from

COVID-19 that people can accept in order to carry on with normal life? Nobody knows and it depends on the risk level that people are willing to accept. The threshold varies from country to country where it is influenced by factors such as ethnicity, culture, politics, religion, and background.

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