### Mini Review



# The COVID-19 Pandemic is Not Over

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#### **ABSTRACT**

The Coronavirus Disease (COVID-19) started in late 2019 in China and was declared a pandemic by WHO in March 2020. The COVID-19 is airborne and highly transmissible. Principal transmission and penetration routes are through the respiratory system. The WHO Chief declared the "End of Global State of Public Health Emergency" for COVID-19 on May 5, 2023. The pandemic issue has not been resolved yet. Vaccinated people can get infected too but not severely, primarly. Nevertheless the COVID-19 infection of any degree is harmful. The virus is viable and evolving around the world. Beside vaccination, supplementary countermeasures must be sought.

Keywords: COVID-19, Pandemic, Transmission, Virus, Evolution

#### Introduction

Coronaviridae family viruses cause respiratory illnesses such as common colds, SARS, MERS, and COVID-19. The Coronavirus Disease (COVID-19) started in late 2019 in China and was declared a pandemic by WHO in March 2020. Since its outbreak, has been ravaging the world causing a large number of morbidity and mortality. The infection is often underrated as it may show no signs or mild symptoms early stages. The problem is it is highly contagious, and the asymptomatic majority are transmitters, unconsciously. The key point is that COVID-19 is airborne and highly transmissible. Principal transmission and penetration routes are through the respiratory system. It is transmitted through polluted air by infected people coughing or breathing, regardless of the concentration or population of viruses, and particle size of the viruses (moistened in groups of so-called droplets.) in the air. The particles range from larger respiratory droplets to smaller aerosols. In other words, both direct modes of transmission as through respiratory droplets, and indirect modes of transmission as through airborne particles (virus nuclei) and passive vectors (fomites) are involved. The combination of these modes of transmission makes the spread of the disease as fast as possible.

The particles could be suspended in the air for a remarkable time and transmitted through infectious air among people. The size of COVID-19 viruses ranges from 60 nm to 160 nm and weighs approximately 1 Femtogram (1.0 gm-15 gm). That is they are extremely minute

in size and exorbitantly light in weight. They can be readily relocated by the air currents. It is not that each solitary single virus is capable to infect people but the classical conception that droplets below certain size unable to cause infection are not applicable to COVID-19 pandemic. In other words, even small aggregates of virus particles can transmit the disease. The majority of infected people have no symptoms or mild symptoms, but others could get worse and show symptoms of pneumonia. The infection is often underrated as it may show no signs or mild symptoms early stages. Subsequently, besides fever and coughs, more serious symptoms, damage, and even death occur. The health care workers are at least 7 times more at risk of getting the infection and thus require protection additional such regular decontamination of the respiratory system and so

The WHO Director-General declared the "End of Global State of Public Health Emergency" for COVID-19 on May 5, 2023. The announcement was somehow ambiguous and led to misleading media coverage. The declaration of the end of the "Pandemic Health Emergency" was not very considerate. Many people across the world assumed the message was "the COVID-19 pandemic is over" and even celebrated it. He admitted in his speech that the actual death toll of COVID-19 might be at least 3 times higher than confirmed cases worldwide which are over 20 million direct deaths, a more realistic estimate. The pandemic issue has not been resolved yet. In low-income and disturbed countries due to poor healthcare systems, access to accurate data is not

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possible and on the other hand, many countries have not been providing transparent and reliable statistics. This announcement may have harmful implications as people across the globe might consider the threat is over, ignoring protective measures. Besides, there has been enormous research and investments in COVID-19 to minimize the pandemic damages in the last three years. They may lose support and momentum as a consequence of this announcement. Herd immunity is not applicable for COVID-19, this is a dangerous misconception. There are a wide range of Post COVD infection implications, residual effects or so-called Long-COVID (PASC) impacts such as neurodegenerative diseases and strokes Alzheimer, Parkinson, foggy brains, blood clotting causing heart attacks, cognitive dysfunction, dyspnea, obscure pulmonary infections, Prion, cancers, and unexpected excess deaths. These reports suggest the COVID-19 infection can cause persistent disarray in our DNAs. The COVID infection may affect each and every tissue and organ. The long-term effects of COVID infection will only be known in the long term. There is still a lot of room for research [1-5].

The Omicron sub-variant XBB.1.16 is now dominant in 33 countries including India, the UK, the US, Italy, Vietnam, and so on with growth advantage and immune escape, long COVID impacts are not known yet. Symptoms includepink eyes, runny nose, sore throat, and fever. The Department of Health of the Philippines declared the pandemic is not yet over and the public should not be complacent on May 9, 2023. Average daily

cases of 4562 were reported in Australia as of May 9, 2023. Thus, from the scientific point of view, it is neither endemic nor epidemic but pandemic as it is still widely spread across the world. The problem is, the virus has a dynamic nature as a single-stranded RNA virus with a high capacity for mutations and evolution. It has been circulating, multiplying, and mutating at large scale worldwide. Hence, the behavior of emerging variants and sub-variants has been inconsistent, and unprecedented. Nobody knows how virulent or deadly the next variant or sub-variant will be. For instance, China is expected to face a new COVID-19 Omicron variants surge of up to 65 million cases a week.

As for as vaccine coverage is concerned, the industrial countries are in a better position but that is not so for low-income countries and war-affected regions. However, no vaccine confers absolute immunity or zero transmission. Vaccinated people can get infected too but not severely mostly. As yet, there is no terminative solution to this global issue.

However, vaccination is a unilateral preventive approach, and supplementary countermeasures such as decontamination of the respiratory system and oral antivirals must be sought. In spite of the remarkable decline in COVID-19 cases worldwide, the virus is viable and evolving around the world. People should observe health care protocols, and safety measures, remain vigilant, and consider supplementary preventive countermeasures as mentioned already.

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