

Omicron Variant of Corona Virus' Covid-19 Pandemic Waves: Any Cause for Alarm?

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ABSTRACT

This abstract looks at the present wave of Omicron B.1.1.529 variant of SARS-CoV-2 variant of concern (VOC) causing COVID-19 epidemic spikes across the world which was first reported in South Africa in November 2021. The viral variant has rapidly spread to all continents of the world and more than half of the countries of the world. So far while the virus is said to have a much higher transmissibility rate compared to the previous epidemic spikes caused by earlier variants, it is generally said to have a milder disease course and infects both the vaccinated and unvaccinated as well. Vaccines are said to prevent severe disease and hospitalizations in Omicron infections. If the generally milder clinical disease picture presented by Omicron continues and subsequent mutations all present a consistently milder clinical pictures, this might as well mark the beginning of the winding down of the present COVID-19 pandemic globally. Meanwhile both the non-pharmaceutical preventive measures and pharmaceutical ones (vaccines and drugs) should be sustained and intensified as we may not know the clinical disposition of the newer variants ahead.

Keyword: COVID-19, Pandemic, Omicron, Variant, Virus

INTRODUCTION

From the time of the outbreak of COVID-19 in December 2019 to date (January, 2022) one of the most important scientific news about the epidemic is the unstable nature of the causative virus with its tendency towards rapid mutations. The earliest variant of SARS-

CoV-2 at inception of the pandemic in Wuhan city is identified as Wuhan-Hu-1 and since then variants of coronaviruses have sprang up in different parts of the world and caused several epidemic waves¹⁻³. At present WHO has grouped available SARS-CoV-2 variants into



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Variants of Concern (VOC) and Variants of Interest (VOI) as:

Variants of Interest (VOI)⁴

- with genetic changes that are predicted or known to affect virus characteristics such as transmissibility, disease severity, immune escape, diagnostic or therapeutic escape; AND
- that has been identified as causing significant community transmission or multiple COVID-19 clusters, in multiple countries with increasing relative prevalence alongside increasing number of cases over time, or other apparent epidemiological impacts to suggest an emerging risk to global public health.

Variants of Concern (VOC)⁴

This consists of variants with all the properties of VOI and the following-

- increase in transmissibility or detrimental change in COVID-19 epidemiology; OR
- increase in virulence or change in clinical disease presentation; OR
- decrease in effectiveness of public health and social measures or available diagnostics, vaccines, therapeutics

Some of the SARS-CoV-2 variants grouped into Variants of Concern (VOC) and Variants of Interest (VOI) have generally been assigned the following names.

UK variant (B.1.1.7 or 20I/501Y.V1)
 South African variant (B.1.351 or 20H/501Y.V2)
 Brazilian variant (P.1 or 20J/501Y.V3)
 Brazilian variant (B.1.1.28)
 India Triple mutant variant (B.1.618)
 US Midwest variant (20C-US or COH.20G/501Y)
 Spain 20A.EU1/S:A222V
 US Southern California variant (CAL.20C)
 France 20A.EU2
 New York B.1.526 (20C/S:484K) and B.1.525

(20A/S:484K)
 Ireland 20A/S:439K
 India Double mutant variant (B.1.617); N440K
 Belgium 20A/S:98F
 Europe 20C/S:80Y
 Norway/Denmark/Sweden 20B/S:626S; 20B/S:1122L
 All the SARS-Cov-2 variants right from inception have been broadly classified into: Alpha variants first detected in United Kingdom in September 2020; Beta variant from South African in May 2020; Gamma variant from Brazil in November 2020; Delta variant from India in October, 2020; and Omicron from multiple countries in November, 2021⁵⁻⁹.

Omicron SARS-Cov-2 Variant (B.1.1.529)

The Omicron variant of SARS-CoV-2 Coronavirus emerged in November 2021 as captured by WHO was first reported to her South Africa on 24th November, 2021 and then from Botswana. It belongs to the variants of concern group and is said to significantly have more mutations than other variants in its S gene.

The common symptoms associated with Omicron include runny nose, headache, fatigue which may be mild or severe, nausea, vomiting, diarrhea, sneezing, and sore throat which are basically the same symptoms associated with delta variant. Fever, cough and loss of sense of smell or taste is said not to be very common among people with Omicron compared with those with delta^{10,11}. In children infection with Omicron is said to lead to harsh barking cough called croup especially in children under five and may be associated with multisystem inflammatory syndrome¹².

In terms of transmissibility, infectivity and severity, Omicron is said to have much higher transmissibility and infectivity compared to the delta and other variants but is said to be generally less severe. This degree of relative less severity is said to be due to its less impact on the lungs causing less injury; the variant can still cause deaths in persons with pre-existing chronic or acute severe ailments¹³. Findings from the city of Tshwane, the epicenter of first Omicron epidemic wave

in a COVID-19 treatment centre showed that: Omicron epidemic wave had ICU 4.0% admissions compared to 21.3% in the previous spikes; the length of admission was 4 days compared to 8.8 days in the past; the mean age of attack was 39 years compared to 49 years in the past wave; the peak of bed occupancy declined to 51% of previous wave; only one third of the COVID-19 patients had COVID pneumonia while 72% had mild to moderate disease; and only 45% of the patients required oxygen supplementation compared to 99.5% in the first wave¹³.

Reports about the Omicron COVID-19 epidemic wave in different parts of the world is essentially similar: In the United states, the variant is said to have spread rapidly across the country as close to half a million cases were recorded in a day thus threatening to overwhelm the health institutions' capacity to care for the sick but happily with corresponding much lower mortalities and degrees of severity compared to the delta wave and earlier spikes¹⁴ In the United Kingdom, findings from East Midlands, East of England, London, North West, North East, South East among others showed Omicron variant infected both the vaccinated and unvaccinated as well who both required admission. The general degree of severity was however lower on most of the parameters listed earlier in South Africa as well as mortalities¹⁵ In India and Pakistan, the Omicron variant is also spreading at alarming rate but with comparable milder infections, and the Indian health authority has announced that booster vaccine doses will not stop the spread, and that everybody should be ready to welcome it^{16,17}; from Brazil in a report released by the country's Ministry of Health in Sao Paulo on December 20 2021 stated that the country had already recorded 27 confirmed cases of Omicron variant with spread projected to be at alarming rate with considerably lower projected mortalities¹⁸; and in Iran, the country's Ministry of Health had stated that by 30th of December, 2021 Omicron variant had already spread to 12 provinces of the country and that the epidemic wave was bound to

spread rapidly in the country but with possible less negative health impacts compared to the previous waves of COVID-19 in the country¹⁹. In New South Wales in Australia by 27th December, 2021 there were rapidly doubling new cases of COVID-19 mainly from the Omicron variant and the government declared that everybody may likely be infected eventually. The transmissibility of the variant while generally high its severity appear to be milder so far in the country²⁰.

Nigeria recorded her first case of Omicron variant infection on 1st December 2021 with high level community spread while in China, the variant was first detected in the port city of Tianjin in South-East Beijing which spread rapidly to 51 people in the country. The virus was traced to Warsaw in Poland and the PRC government has been making all efforts to contain it^{21,22}.

In conclusion, Omicron B.1.1.529 SARS-CoV-2 variant is the most transmissible and most highly infectious variant so far but so far is milder than all the previous variants in clinical presentation. While more time is still required to ascertain the level of virulence and impact of disease burden it would inflict on humans, its high transmissibility rate is counter-balanced by its generally mild clinical picture. The virus attacks both the vaccinated and the unvaccinated as well and the non-pharmaceutical preventive methods of social distancing, hand washing, face masks do not completely eradicate its transmissibility. If the Omicron variant continues in its mild clinical presentation and newer variants continue in the same pattern, this could mark the beginning of the winding down of this entire COVID-19 pandemic globally.

While we may not understand clearly the complete nature of Omicron B.1.1.529 variant for now, all the preventive measures already in place should be sustained and strengthened to mitigate its transmissibility and vaccinations sustained with booster doses.

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