What is the Omicron Variant?

On November 26, 2021, the WHO declared the B.1.1.529 Variant from South Africa a Variant of Concern (VOC) [1]. This is the first VOC since the emergence of Delta in early 2021. Public health officials are particularly concerned about Omicron due to a very large number of mutations, particularly on the spike protein. As such, there is speculation that it could be more infectious, have more vaccine resistance, and cause greater risk of reinfection than other VOCs. However, further studies are required to better understand the characteristics of Omicron.

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What is known so far about the Omicron Variant?

The Omicron variant contains ~50 mutations, with 30 on the spike protein – a significantly higher number than for the Delta variant [2]. These mutations could potentially confer higher transmissibility, stronger resistance to vaccines and therapies, and a greater ability to cause reinfection compared to previous variants. There is currently no information to suggest that symptoms with Omicron are different from other variants [1].

Note: no prior VOC has been able to significantly evade existing vaccines.
What is known so far about the Omicron Variant?

Most cases have been found in South Africa, where Omicron is believed to be causing a significant and rapid increase in cases [1]. However, it is important to note that overall vaccine coverage in South Africa is only 25% fully vaccinated, which is a significant contributor to the rate of spread. Cases have also been found in Botswana, Hong Kong, Israel, and Belgium. These have largely been epidemiologically linked to people with travel from South Africa, although the Belgian case only had recent travel from Egypt, suggesting potentially wider circulation of the VOC than is currently known.
What is not yet known about the Omicron Variant?

Omicron’s mutations have the potential for higher infectiousness, resistance to vaccines and treatments, and greater reinfection risk, but we do not know the magnitude to which this occurs. We also do not know if Omicron causes more severe infection than Delta and other VOCs [1]. Some of these questions will be answered in the coming weeks – in vitro (i.e., lab studies) of vaccine efficacy could be available as early as a few weeks time.

While research remains ongoing, it is essential to continue following public health guidelines to reduce the spread of COVID-19.

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How have public health authorities responded?

Public health authorities around the world have responded quickly to Omicron, with the WHO designating it as a VOC within just weeks of its initial detection [3]; however, given how quickly has emerged and become designated as a VOC, there remain many unknowns in terms of the optimal public health response.

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How have public health authorities responded?

On November 26, 2021, many countries including Canada and the United States announced travel restrictions or bans from South Africa and neighbouring countries (e.g., Namibia, Botswana, Lesotho, Mozambique, Eswatini) [4]. Federal and provincial public health authorities are currently assessing the risk Omicron poses, and we face a rapidly evolving situation where more is likely to emerge in the coming weeks as we continue to learn about this VOC.
References


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