

What to Know About the New BA.2.75 Omicron Subvariant

— Now spreading in at least 10 countries, but it's too soon to tell how virulent or deadly it is

by [Sophie Putka](#), Enterprise & Investigative Writer, MedPage Today

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Even as BA.4 and BA.5 continue to climb the charts, crowding out earlier Omicron subvariants, scientists are warning about an even newer strain: BA.2.75.

Tom Peacock, PhD, a virologist at Imperial College London, [tweeted](#) on June 30, "worth keeping a close eye on BA.2.75 -- lots of spike mutations, probable second generation variant, apparent rapid growth and wide geographical spread."

It's a quickly spreading variant with a host of spike mutations appearing together, but scientists say it's still too soon to know for certain exactly how much better -- if at all -- BA.2.75 is at escaping natural and vaccine-induced immunity.

Here's what we know so far about the newly mutated descendent of BA.2:

Where Is It Spreading?

So far, the subvariant has made its way to at least 10 countries in Asia, Europe, North America, and Australia.

BA.2.75 was first detected in India in early May and has been spreading quickly since. It made up almost 25% of samples there as of June 2 and is competing with BA.5 and BA.2, according to Katelyn Jetelina, PhD, MPH, an epidemiologist at the University of Texas School of Public Health in Dallas.

A more recent [analysis of coronavirus sequencing](#), posted by a scientist in Australia, suggested the proportion of cases has jumped much higher as of July 8 -- growing to nearly half of COVID cases sequenced in India.

A CDC spokesperson confirmed in an email to *MedPage Today* that there have been two cases of BA.2.75 detected in the U.S., with the first specimen collected on June 14. This is still not enough to get on the CDC's [variant tracker](#), where it is still unlisted.

Is It More Transmissible?

The BA.2.75 lineage has "9 unique changes in the spike protein," according to a [Twitter thread](#) from Vinod Scaria, MBBS, PhD, principal scientist at the CSIR Institute of Genomics & Integrative Biology in New Delhi.

One mutation, G446S, is in the part of the spike protein that binds to receptors in our human cells, and is "associated with major immune (Ab) escape."

Scaria also noted that while the number of genomes available to examine in India are still very small, "the rapid increase in recent weeks ... suggest it might have a growth advantage."

However, Marc Johnson, PhD, a professor of molecular microbiology and immunology at the University of Missouri's school of medicine, said in an email to *MedPage Today* that "we don't really know if BA.2.75 is more transmissible or more severe at this point."

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"What we do know is that it has amino acid changes that allow it to evade particular neutralizing antibodies," he added.

Is It More Severe?

Johnson and Scaria emphasized that there is not yet any suggestion that BA.2.75 is more virulent or will increase mortality.

The WHO's chief scientist, Soumya Swaminathan, MBBS, MD, said [in a video](#) that "it's still too early to know if this subvariant has properties of additional immune invasion, or indeed of being more clinically severe."

However, Jetelina noted that a recent analysis suggested "BA.2.75's impact will be dependent on infection history," and that those with a previous BA.1 infection may actually have a *lower* probability of losing immunity than those who had BA.2.

Will Vaccines and Treatments Provide Protection?

As with each subvariant removed from the ancestral strains of SARS-CoV-2 the vaccines were based on, "vaccines will still provide protection [against BA.2.75], but even less than before," Johnson said. However, it's important to note that vaccines still offer strong protection against severe COVID-19 disease and death.

"Given the additional mutations, it is likely that nearly all monoclonal antibodies are ineffective against BA.2.75, as is the case for BA.5," said Charles Chiu, MD, PhD, a professor of laboratory medicine and infectious diseases at the University of California San Francisco, in an email to *MedPage Today*. But he noted that oral antivirals like nirmatrelvir-ritonavir (Paxlovid) have continued to be effective in treating Omicron sublineages.

Is There Reason for Concern?

"We should be concerned, yes, but we shouldn't freak out," Johnson said. "This lineage has a good chance to increase infections and become the new dominant lineage, but it is not likely to cause a sweeping wave the way that Omicron did."

Scientists stressed that much more genomic surveillance and data are needed to gain a more complete picture, and Peacock even wrote that BA.2.75 might not even grow to be a dominant force.

"It's entirely possible this is just growing against a background of BA.2(12.1) and that it hits the encroaching wall of BA.5 and stalls out," he tweeted. "We will see."

[Sophie Putka](#) is an enterprise and investigative writer for MedPage Today. Her work has appeared in the Wall Street Journal, Discover, Business Insider, Inverse, Cannabis Wire, and more. She joined MedPage Today in August of 2021. Follow 
