‘Children of Omicron’: What public health threats lie ahead as COVID evolves?

“SARS-CoV-2 is continuing to evolve extremely rapidly,” says Trevor Bedford, a computational biologist who studies the evolution of viruses at the Fred Hutchinson Cancer Center in Seattle. “There’s no evidence that the evolution is slowing down.”

Instead, the most consequential evolutionary changes have stayed confined to the omicron family, rather than appearing in entirely new variants.

Whereas alpha, beta, gamma and the other named variants sprouted new branches on the SARS-CoV-2 family tree, those limbs were dwarfed by the omicron bough, which is now studded with a plethora of subvariant stems.

“The children of omicron — so the many direct children and cousins within the diverse omicron family — those have displaced each other” as the dominant strains driving the pandemic, says Emma Hodcroft, a molecular epidemiologist at the University of Bern.

Those mutations endow these omicron offspring with the one power they need most right now: the ability to sneak past the immunity that people have built up from getting infected, vaccinated, or both.

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While all this sounds dire, omicron’s long period of dominance is giving some scientists some hope.

The virus could, in one relatively optimistic scenario, keep evolving this way for a long time, drifting in more subtle evolutionary directions like the flu, without sudden shifts in how it behaves that make it more dangerous.

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