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# The real spectre of Pathogen X

While Covid-19 and its health and social impacts on the world are slowly but surely receding from the public mind, epidemiologists and virologists are preparing for other diseases that will surely come. By **Estelle Ellis**

While the emergence of Pathogen X, the potential driver of a new global pandemic, is uppermost in public health experts' minds, virologist and epidemiologist Prof Salim Abdool Karim says the latest data from Discovery Health Medical Scheme members is showing that the long-term consequences of Covid-19 infections will have a massive impact on the health system in years to come.

Other potential dangers that continue to pose a threat include a new variant of the SARS-CoV-2 virus, a potentially severe flu virus and other viruses that jump from animals to humans, such as Ebola.

Karim says there are three scenarios for the next three to five years.

"The first is that we need to acknowledge and appreciate that we are still living in a pandemic. It hasn't left us.

"The emergency of the Covid-19 pandemic is receding. Hospitals are not getting full, people are not dying in the same way as in 2020. But this doesn't apply to the whole world," he said.

"Many countries are still dealing with waves of infections. In the United States, there are 400 deaths a day due to Covid-19. In South Africa, we are still in double digits. Some days we record a low three to four

deaths and other days 20 to 30 deaths. People are still dying, but not to the extent that we were concerned about in 2020.

"There is still a reasonable chance that the virus can mutate and create a new variant. This virus will have the potential to escape our current immunity."

Karim says two descendants of the Omicron subvariant BA.5 are the latest mutations of the virus.

"They can escape almost every antibody that is available. That means that none of the monoclonal antibodies work against them," he said.

Monoclonal antibodies are clones of the human body's antibodies that are made in a laboratory and meant to stimulate the immune system.

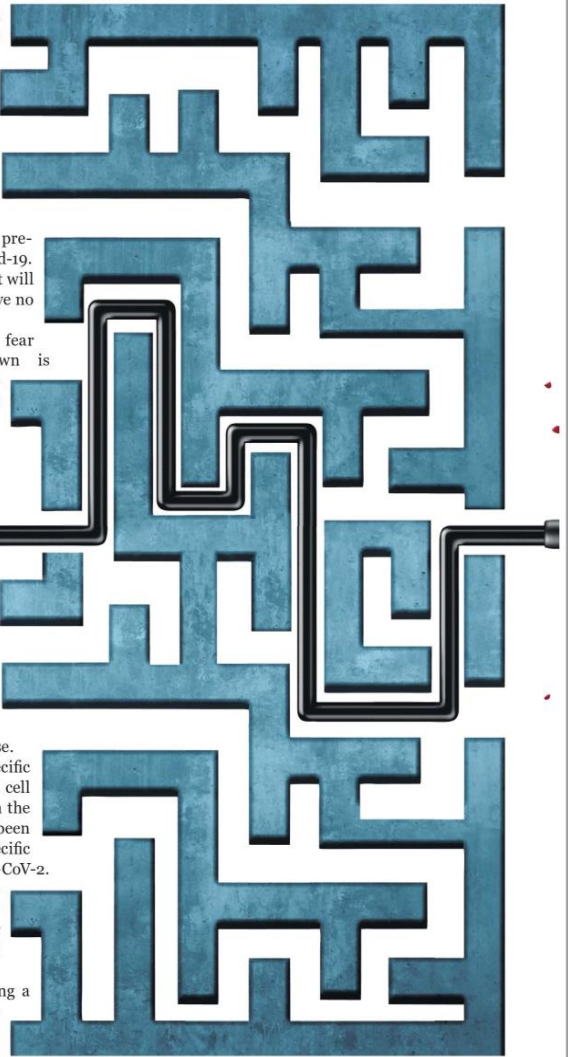
"The other problem is that they will escape

vaccine-induced immunity," Karim added. "That is our ongoing concern – that we may get to a new variant that has a high level of escape and that this will spread.

"The big plus is that the vaccine is doing very well in preventing severe Covid-19. We are hoping that it will continue. But we have no guarantee."

Karim says one fear about the unknown is whether the virus will be able to mutate

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to the extent that it can escape a sizeable amount of the body's T-cell response.

T-cells are a specific type of white blood cell that kills the cells in the body that have been infected by a specific virus, such as SARS-CoV-2.

"How likely is the potential of a new variant? I would say there is a small chance.

"We were expecting a wave to occur in the middle of last year, but after we had our



China has shifted the focus of its Covid-19 response strategy from curbing new infections to preventing and treating severe cases. Photo: Yang Qing/EPA-EFE