Why the Fourth Wave is ebbing in SA

What goes up, must come down – even when it comes to Covid-19. But the Omicron-driven wave has surprised us all by falling almost as quickly as it shot up. We ask scientists what’s behind the numbers. By Tamsin Metelerkamp

The Fourth Wave of Covid-19 has moved through South Africa at a faster rate than its predecessors. On 3 November, a wave-driven peak of cases in early December had scientists in South Africa and around the world wondering how to answer key questions about the new variant. Only a month later, the data reassured them that the country seemed to be past the peak of the latest surge.

South Africa is now at the tail-end of the Fourth Wave, according to Professor Salim Abdool Karim, the director of the Centre for the Study of流行病学和流行病学 Research in SA.

“What we have found is that, with each wave, the rate at which it goes up is similar to the rate at which it goes down,” Karim said. “[With] Omicron, the speed of the virus is substantially faster. So, the peak was reached much faster than it took us in the previous waves, and that’s why it’s going to end faster as well.”

Although the number of infections is coming down, Dr Maggie Coetzee, chairperson of the South African Medical Association, recommended that South Africans continue to give it another two weeks before they “start to celebrate.” That’s what the schools do with the opening,” she said.

The vast majority of cases in recent weeks have been driven by the Omicron variant, with genomic sequencing results released by the Netwerk vir Genomic Surveillance in SA showing that 98.3% and 99.9% of sequenced Covid-19 samples in November and December 2021, respectively, were Omicron.

“In previous waves, cases, hospitalisations and deaths ... went up together, but, in Omicron, there were far fewer cases, and far fewer deaths and hospitalisations,” said Professor Glenda Gray, president and CEO of the SA Medical Research Council.

This trend was captured in a latest pre-print paper released on December 2021 examining patients admitted to hospitals in Gauteng during the Fourth Wave. The study, which had yet to be peer-reviewed, indicated that, although the number of positive cases identified in the first four weeks of the Fourth Wave was far higher than in previous waves, the proportion of those cases that was admitted to hospital was lower, with 0.6% admitted in the Delta wave, 1.5% in the Beta and 1.3% in the Omicron wave.

“This [wave] is much easier and less severe than other waves that we are seeing; the majority of people [have had] mild disease,” Coetzee said.

Too early to tell?

A plausible explanation for the lower incidence of severe disease and death in the Omicron wave in South Africa is the higher levels of population immunity in the country related to previous waves, according to Professor Shabir Madhi, dean of the faculty of health sciences and professor of vaccinology at the University of the Witwatersrand.

"What has transpired during the course of the pandemic is that there’s just been a tremendous high level of infection that’s occurred in South Africa,” said Madhi.

"Consequently, despite a really startling Covid vaccine roll-out, we still got high levels of immunity... and that immunity is specifically better equipped in preventing or protecting against severe disease and death, rather than preventing infections and mild disease."

Another possible explanation is that the characteristics of Omicron itself made it relatively less able to infect the lower airways than previous variants, said Madhi.

"Omicron is much less efficient in infecting the lower airways than Delta variant... but it is far, far more efficient in infecting the cells in the nasal epithelium - in other words, the cells that are in your nose, the back of your throat and in your bronchi,” said Karim.

As such, Omicron might be less likely to manifest with pneumonia or a lung infection, and more likely to manifest with upper-airway symptoms, said Madhi.

For patients over the age of 60, who are now over three months old, it is important to visit a doctor or contact Covid-19 if their symptoms were mild, Coetzee said.

Protection

Throughout the world, the people who tend to end up in hospital as a result of Covid-19 are unvaccinated, according to Coetzee. Karim has observed that, although vaccination may not prevent you from contracting Omicron, the intensity of the symptoms differs between vaccinated and unvaccinated individuals. "Unvaccinated people will feel their symptoms and have fatigue, their sore throat, their headaches; they will experience it much more intensely than vaccinated people," she said.

Discovery Health released preliminary analysis of data from the first three weeks of the Omicron-driven wave in South Africa on 1 December 2021, showing that the four-dose Pfizer/BioNTech vaccination provides 96% protection against severe complications of Covid-19 and 92% protection against Covid-19 infection. The preliminary results from the South African Phase 3 (Shambhala) study - released by Johnson & Johnson on 30 December 2021 - show that the single booster shot has 85% effectiveness against Covid-19 related hospitalisation.

Way forward

The restrictions that are currently in place to manage the pandemic need to be re-evaluat-ed, said Verster. By having an "internal road map", people were likely to be more flexible protocols security.

"The one thing that makes sense to me is for people to take care when they are indoors to try and limit indoor gatherings and to wear masks when they are indoors," he said. "And obviously, vaccination, vaccination, vaccination."

It was not enough, however, to rely on current vaccines and booster shots, as members of the public seem likely to become less corporeate with booster-shot programmes over time, Coetzee said. These approaches need ed to be combined with common sense and new pharmaceuticals.

"We need to get our economy going, we need to start to open up so free flow with this virus, we need to start to learn to live with this virus and for the people around us," she said.

South Africa has had a relatively consistent three-month gap between waves. In the reasonable likelihood of a Fifth Wave, the country will probably experience it at the end of April or beginning of May, Karim said.

"We need to use in preparation for any new waves, but hopefully we’re not going to have to use it," he said. "We’re going to have to drive by a new variant – it needs our combination prevention, vaccin- es plus public health measures."