THE COVID-19 STORY STORY IS COMING

While projected mortality rates vary, experts urge that **testing be increased** and hotspots identified to avoid 48 000 deaths in the next four months

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outh Africa is only expected to reach the peak of the Covid-19 coronavirus in August or September, but the Actuarial Society of SA (Assa) has warned that as many as 48 000 people could die if the country fails to flatten the curve.

Public health specialists have also suggested that now may be the time to move from surveillance of the disease and active case-finding to focusing on hotspot areas, which would mean intervening in the clusters where the disease has been shown to be problematic.

They argue that this change in strategy is necessary as the community screening intervention process - which saw 28 000 community healthcare workers go door-to-door in vulnerable communities to screen and test symptomatic people - has not quite yielded the detection of cases that was anticipated.

Yesterday, Health Minister Zweli Mkhize said the number of confirmed Covid-19 cases had risen to 9 420 - an increase of 525 infections from the previous day. Eight more people were also confirmed to have died of the virus, bringing the number of deaths to 186. A total of 324 079 people have been tested for the virus across the country.

The Western Cape has recorded the highest number of cases, with 4 809 people testing positive for Covid-19. It also recorded the highest number of new cases - 312 - in 24 hours.

Gauteng lags behind the province with 1910 cases of Covid-19. The government has identified other hotspots, including metros in Johannesburg, Tshwane, Ekurhuleni, eThekwini, Gingindlovu and Buffalo City.

After a meeting with Western Cape Premier Alan Winde, as well as seven professors, epidemiologists and doctors working on the province's response to the outbreak, Mkhize said it was clear that the province was a hotspot - and, as such, it required a containment strategy. He expressed concern at the countrywide shortage of diagnostic test kits.

Earlier in the week in Rustenburg, North West, Mkhize had said he was "pleased" with the countrywide screening of citizens, adding: "As of May 5, 8 216 605 citizens have been screened across the country."

Mkhize has attributed the success in pushing back the Covid-19 peak infection rate to the lockdown. However, he has cautioned that the storm could still arrive earlier.

"In the worst-case scenario, we can expect that to be earlier in July. But if we were to prolong the lockdown longer than that, it would not proportionally increase the extension of the peak by many more months. So, the difference is not going to be too much ... Our timing was perfect. We had a bit of an advantage and time to plan," Mkhize said.

"The focus did indicate that there was a need for us to do the lockdown to slow the rate at which the infection is spreading, therefore pushing the peak to a few months later, and this has been achieved. Of course, it means the infection is still going to rise, but it won't increase to the same level that it would have if we did not do anything."

However, added the minister, "we cannot continue with the country locked down forever ... we need to now get people to begin to understand the change in behaviour



OPEN WIDE A man is swabbed during the Covid-19 scanning and testing process that took place in Diepsloot this week. Gauteng Premier David Makhura and health MEC Bandile Masuku visited the site during the proceedings

PHOTO: TEBOGO LETSIE

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that allows us to get back to normal economic activities". "For that to happen, we need to start easing the

lockdown bit by bit, depending on where the high-risk areas are," he said. "In this case, we are actually looking at how to reclassify each and every district so that we know what more we can do in which area."

Mkhize appeared to agree with the strategy of a focused approach, as suggested by the experts, saying things would be done differently, depending on each case and situation in various parts of the country.

"In some areas where we think the risk is too high, we need to contain it a bit before we can actually open up normal activities. So, a different approach will be seen because we are dealing with a practical and dynamic situation ... The districts are not the same," Mkhize said.

Citing the Free State as an example, he explained how the situation in that province was being dealt with: "If you asked me a few weeks ago, I was very worried about the Free State ... I thought it was going to be an epicentre, like Wuhan in China. We went there and dealt with it, and we actually got it contained in a way that stalled the infection, in a manner that is now different from what we have seen in the Western and Eastern Cape. We don't have a one-size-fits-all situation."

Mkhize expressed the same sentiments yesterday at the meeting with Winde and the medical professionals. He said it had been agreed that the approach going forward would require a differentiation and delineation of various areas into blocks, and that stricter restrictions might need to be applied to areas in the Western Cape with higher numbers of cases.

"Cluster outbreaks in the Western Cape are happening in commercial settings such as factories, supermarkets and such, which have had to close down. This means that there are higher rates of infection ... this means that we need stricter restrictions in these areas," he said.

Commenting on the need to quarantine people who had tested positive for the virus to prevent them from infecting others, Mkhize said this was an area of concern. He said that a resolution taken at the meeting was that every patient testing positive in the province would be hospitalised, even if they were not sick [in other words, were asymptomatic]. He added that the province would increase its field hospital capacity to keep Covid-19-positive people from contacting others while they were still infectious.

According to Dr Kerrin Begg, a specialist in public health medicine, community screening has not been as

effective in detecting cases as was hoped. She attributed this to provinces - save for the Western Cape - having focused on testing symptomatic people as opposed to asymptomatic people. She pointed to new global evidence showing that, in 50% to 80% of cases, people will not show any symptoms at all, meaning they will not be ill.

"What we were hoping, in the active detection of cases from community screening, was that our case detection would go up. But it has been quite low - only 1%. We are not being very effective in detecting cases that way," Begg told City Press this week.

"When we look at the Western Cape, case detection is much higher than in the rest of the country, particularly in the past two weeks. Overall, over the past two weeks, it has been over 10%, which is five times what the other provinces are picking up."

Mkhize has expressed concern about interprovincial movement between the Western and Eastern Cape after lockdown restrictions were lowered to level 4 to allow people to travel back to their provinces of work or residence. Just this week, 56 people travelling from the Western Cape to the Eastern Cape tested positive for Covid-19 after being tested at the borders. The figure has since increased to 80.

On Friday night, Mkhize said: "With interprovincial movement between these provinces being an issue, it will be crucial for us to understand the dynamics driving the epidemic in this region and assist where necessary."

However, Begg said that the surge in cases was always going to come; it was just a matter of when - and it appeared that the Western Cape's surge had come before the rest of the country.

"What's happening is that the Western Cape is detecting at a higher rate, either because the province does indeed have more cases in reality, or because the other provinces are not being effective in detecting cases," Begg explained. "Furthermore, global evidence is showing that 50% to 80% of people who contract Covid-19 will not have any symptoms and, in light of that, the Western Cape has been more intentional with screening in workplace-based clusters, and has tested even asymptomatic people - which is why we have seen more people test positive.

"We did a review this week and saw that at least a quarter of cases in the workplace clusters [from essential service areas such as hospitals, supermarkets and police stations] are asymptomatic cases."

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Using a baseline scenario that assumes that one infected person is likely to infect three others, and that 75% of infected people present as asymptomatic, a team consisting of some of the country's leading healthcare actuaries developed a model to assist their profession's stakeholders in understanding the impact of Covid-19.

Lusani Mulaudzi, a healthcare actuary and the president of Assa, said that the model was based on the key mechanisms of a pandemic, namely susceptibility, exposure, infection and recovery.

"Conservative modelling indicates that the peak is only likely to be reached between August and September, depending on the effectiveness of lockdown and other non-pharmaceutical interventions (NPIs). Deaths may exceed 48 000 within the next four months if government does not remain strict about to flattening the curve."

According to Mulaudzi, the most optimistic scenario assumes that the lockdown initiative reduces the

reproduction number (a method of rating the ability of the virus to spread) to 1.5 and that NPIs after the strict lockdown period result in a reproduction number of 2.1.

In this scenario, hospital bed usage would peak at 70 000 between August and September, and requirements for intensive care unit beds would be just over 10 000. Expected cumulative deaths stop short at just over 48 300.

"We have to caution that the projected mortality figures are sensitive to the mortality assumptions made. Views on the Covid-19 impact on mortality rates still vary widely and, as more data becomes available, we may find that the actual mortality figures are significantly different to what has been projected," he said.

An projection prior to the lockdown was reported on by News24 in March. Prepared by the SA Centre for the Epidemiological Modelling and Analysis in conjunction with the National Institute for Communicable Diseases, the model showed that between 87 900 and 351 000 people would die from Covid-19 if no interventions were made.

These projections were reportedly behind what catapulted the state into action to impose stringent regulations.

Shabir Madhi, a professor of vaccinology at Wits University, said the country was still at an early stage of the pandemic, even though the case numbers seemed "frightening".

"It is only in the next few months that we are going to see many, many new cases peaking, probably at up to 6 000 new cases per day come July and August."

Madhi said that between 15 000 and 20 000 people should be tested daily.

"We are not testing at scale in South Africa. Another big problem is that it's taking five to 10 days for the results to get back from the National Health Laboratory Service. It is a waste of resources to be testing when it takes five to 10 days, because, even if the person was positive five to seven days ago, they probably are no longer infectious. And it is too late to try to find all those who that person had

contact with in those 10 days."

Begg said it was time the country moved to stage five of the national response, in accordance with the presentation given last month by epidemiologist Professor Salim Abdool Karim, chairperson of the ministerial advisory committee on Covid-19. This would mean homing in on the hotspots.

She said: "We have learnt lessons from the Ebola outbreak - for instance, that you can isolate mini areas like in an informal settlement, where you can isolate an area and let people move around, but only in that block. This, rather than have the whole country in lockdown when a farmer in De Aar has so little risk of being infected. That's what hotspot management is, which is what the professor explained.

"Then we make sure we are ready for the [infected] people, which is what we've been doing by creating field hospitals and managing healthcare worker exposure. Those are things we should be putting our limited time and money into.