While projected mortality rates vary, experts urge that testing be increased and hotspots identified to avoid 48,000 deaths in the next four months.
THE COVID-19 STORM IS COMING

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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 Mulauldi, 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 Mulauldi, 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.

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 48,000.

"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 and 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."

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