

■ FEATURES

How Cape Town became SA's Covid epicentre

Covid-19 is cutting a swathe through the Western Cape, where it gained an early foothold, but the jury is still out as to whether SA is experiencing two divergent epidemics

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Hot spot: Western Cape premier Alan Winde at the Cape Town International Convention Centre, which has been prepared for Covid-19 patients. Picture: Esa Alexander

Western Cape hospitals, at the epicentre of the pandemic, are filling up rapidly with Covid-19 patients. But despite how bad it looks now, SA's tourist capital may not have it any worse than the other large provinces in the long run.

The impression that the province is experiencing a more severe epidemic than the rest of the country is skewed by the fact that it does proportionately more testing and tests more aggressively in known hotspots, according to the provincial government. (As of last week, it had conducted 1,200 tests per 100,000 people, against Gauteng's 837 per 100,000.)

"The Western Cape is doing more testing per 100,000 of the population and has been testing differently, using an active case-finding approach, specifically testing around clusters and 'bushfires', which has resulted in a higher positive rate," explains Western Cape premier Alan Winde.

ADVERTISING

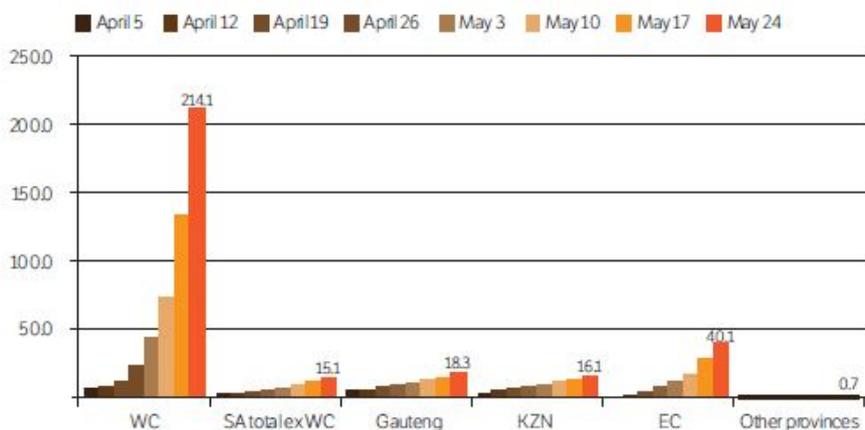


But he also concedes that community transmission, which started earlier in the Western Cape than in other provinces, has now become entrenched. "This means that our curve has accelerated faster, resulting in a higher number of infections," he says.

The prevailing theory is that the virus seeded in multiple places in Cape Town earlier than the rest of the country, given its position as an international tourist hub. International flights continued until March, and with health screening at airports limited to temperature checks, asymptomatic travellers would have slipped through, infecting locals who carried the coronavirus silently into their communities.

WIDE DISCREPRANCY

Number of cases per 100,000 residents



Source: Trade & Industrial Policy Strategies (calculated from data accessed at sacoronavirus.co.za on relevant dates)

The virus's spread was boosted initially among essential workers during the hard lockdown – in a supermarket in Khayelitsha and the GlaxoSmithKline factory in Epping, where 99 workers tested positive before it was closed by authorities.

Right now, the numbers look scary – by Sunday night, new infections in SA had jumped by 1,245 in just 24 hours to 22,583. The Western Cape (which has 12% of SA's population) accounted for 14,740 (65%) of these.

But Winde is not panicking. "Our peak will be earlier, but we expect that similar trends will be seen elsewhere in the country in the coming weeks," he says.

Indeed, Prof Salim Abdool Karim, who chairs the government's coronavirus task force, said last week that the Western Cape could be providing an indication of how the pandemic will progress elsewhere in SA.

However, Neva Makgetla, a senior economist at the Trade & Industrial Policy

Strategies (Tips) think-tank, believes the Western Cape is facing a "qualitatively different" pandemic to that of the rest of SA.

Over the past week, the province has accounted for three-quarters of all new cases, according to the latest "Tips Tracker", with infection rates rising by 6.8% a day compared with 4.8% in the Eastern Cape and 2.5% in KwaZulu-Natal and Gauteng.

The viral incidence in the Western Cape is now roughly 200 cases per 100,000 people, compared with 13 per 100,000 in the rest of SA.

Makgetla likens this pattern to the situation in South Korea, where Daegu, a city of 2.4-million people, was put into lockdown in March when the rest of the country had almost no restrictions in place. Similarly, in New York City the incidence of known cases reached 2,400 per 100,000 on May 24, while it was just 400 per 100,000 in the rest of the US.

In addition to the usual reasons advanced — the Western Cape's role as a global tourism hub and its relatively dense informal settlements with largely shared facilities — Tips contends that the province has been less successful in managing mass screening and contact tracing than other provinces.

"That made it more difficult to prevent new infections by identifying infected people and quarantining them," says Makgetla.

“ The Western Cape is using an active casefinding approach, specifically testing around clusters and ‘bushfires’, which has resulted in a higher positive rate ”

- Alan Winde

"In the absence of mass screening, its higher level of testing per resident than the rest of the country was not adequate to track the spread of the infection."

She cites national department of health figures which show that as of May 14, the Western Cape had failed to reach 17% of the identified contacts of known cases, compared with 14% in the Eastern Cape, 0% in KwaZulu-Natal and 2% in Gauteng and the remaining provinces.

Makgetla also notes that while the Western Cape has a higher level of testing per resident than the rest of the country, it also has a much larger incidence of Covid-19, which means that it requires higher testing rates relative to the number of known cases to track infection.

Instead, its figures are much lower than other provinces.

According to the national department of health, the Western Cape had conducted 12 tests for each known infected person as of May 15, compared with 26 tests for each known case in the Eastern Cape, 51 in KwaZulu-Natal, 66 in Gauteng and 214 in the rest of the country.

With the jury still out as to whether SA will continue to experience two divergent epidemics over the long run, a severe one in the Western Cape and a milder one everywhere else, wildly divergent model projections are muddying the waters even further.

According to the SA Covid-19 Modelling Consortium's model — one of a range of models used by the government — the virus will at best peak in the Western Cape in late June with 750,000 cases, followed in early July by Gauteng (with 1.5-million cases) and KwaZulu-Natal (1-million cases), in line with their respective population sizes.

However, according to a best-case scenario prepared for the Western Cape government by Prof Andrew Boule of the Centre for Infectious Disease Epidemiology & Research at the University of Cape Town, only 80,000 people will become infected in the province and more than 90% of these will recover at home.

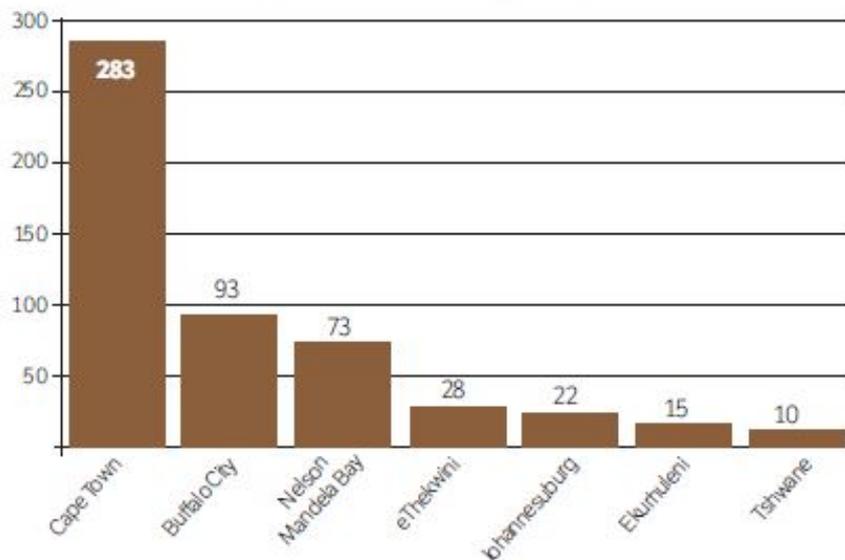
Winde says models of the Actuarial Society of SA and the consortium have been

nationally determined without being validated against provincial data or the province's own assumptions about the need for ICU care.

So, while the consortium projects that the Western Cape will need 4,000 ICU beds, the province thinks it will need only 1,600.

DESIGNATED METRO HOTSPOTS

Estimated cases per 100,000 as at May 22



Source: Trade & Industrial Policy Strategies (population figures from Quantec EasyData; reported cases from provincial reports)

Currently there are 151 Covid-19 patients in ICU in the Western Cape. The province will have access to 850 ICU beds at the peak, including in the private sector and field hospitals, so estimates it will be 750 beds short.

Nationally, the shortfall could be much worse. There are 3,300 ICU beds across the whole of SA but if the virus peaks at 1-million active cases as predicted by the consortium, about 25,000 ICU beds will be needed.

But susceptible-exposed-infected-recovered (SEIR) models, like the consortium's, are increasingly being taken with a pinch of salt given their failure to predict the course of the pandemic in other countries.

In the UK, for instance, the 5,000-bed Nightingale field hospital in London was closed without ever experiencing the predicted surge in demand.

Makgetla argues that because the consortium model originated as an effort to simulate the need for ICU beds and equipment to avoid an overload at hospitals, "this kind of model inherently leans towards overstating rather than understating cases".

These models are also not well geared towards capturing how changes in public behaviour, like increased social distancing or hand washing, or national lockdowns, may limit the spread of the virus. If these measures are successful, the actual peak could be much lower than the forecast spike.

Unfortunately, the opposite may also hold true. For instance, several countries – including South Korea, Singapore, Taiwan, Vietnam, New Zealand, Australia, Germany, Denmark and Greece – have avoided the spikes predicted by most epidemiological models. However, the US, Brazil and Mexico have fared far worse.

According to Nick Hudson, Peter Castleden and Ian McGorian from Pandemics – Data & Analytics (Panda), the projections made by SEIR models are cases of "outlandish academic scientism, devoid of satisfactory explanation and transparency".

Based on their own modelling, as well as the pandemic's progression in other

developing countries, the Panda team doesn't expect SA to experience more than 10,000 deaths. So far 407 people have died in SA.

"[SEIR models] are causing fear and driving policymakers to implement measures that we have shown are hugely damaging to SA lives and our social fabric," they wrote in BizNews last week.

"Their acolytes need to explain how their models account for these observations. If they cannot, then our policymakers owe it to the nation to recruit new advisers."