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## Covid-19: Excess deaths point to hidden toll in South Africa as cases surge

Owen Dyer

South Africa seems close to the peak of its infection curve after an alarming month long surge in which the country of 59 million leapt from 18th to 5th in the world for total cases, which now stand at 459 761.

In a continent where 37 of 54 countries still have fewer than 5000 cases, South Africa's modernity has worked against it. As a trade and travel hub, it saw more early cases than other African nation, and its strong transport network has helped the virus to penetrate the countryside. There are early signs that new cases might be levelling off, but overall mortality figures indicate that far more people have died in recent months than South Africa's reported covid-19 deaths can account for.

The South African Medical Research Council (SAMRC) publishes a report on weekly deaths, one of the few such databases available in middle income countries. It shows that from 6 May to 14 July, South Africa reported 4453 covid-19 deaths, but experienced 17 090 more deaths from all natural causes than would be expected based on historical averages.<sup>1</sup>

Glenda Gray, president of the SAMRC, said that these excess deaths "may be attributed to both [unreported] covid-19 deaths as well due to other diseases such as tuberculosis, HIV, and non-communicable diseases, as health services are re-orientated." The phenomenon is well known, especially in Africa. After the west African Ebola outbreak of 2014, research indicated that 11 300 deaths from the virus had been nearly matched by 10 600 excess deaths from other diseases, especially malaria, HIV/AIDS, and tuberculosis.<sup>2</sup>

But there are hints that unreported covid-19 is the biggest factor in South Africa's unexplained excess deaths. Eastern Cape province, which tested less than Western Cape, recorded fewer covid-19 deaths but more overall excess deaths. If covid-19 is largely responsible for South Africa's unexplained excess deaths, the country's real toll from the pandemic so far would be approaching levels seen in western Europe.

The spikes in Eastern Cape and Western Cape provinces came as economic life resumed in South Africa in early June, after two months of exceptionally strict lockdown, which saw alcohol and tobacco sales banned. These two provinces remain the hardest hit in terms of deaths, but the pace of new infections has fallen sharply there.

The bulk of July's cases came from populous Gauteng province, where Johannesburg, Pretoria, and Soweto form a conurbation of 12 million people. Cases are still rising around Pretoria, but Gauteng overall—like the country overall—seems to be levelling out as it reaches the height of what South African president Cyril Ramaphosa is calling "the storm."

About one test in four has been positive all through July, but the positivity rate is now trending downward, as are reported new daily cases, which reached a monthly low of 7120 on 28 July. In mid-July, South Africa reimposed a curfew and its alcohol ban, designed to reduce domestic violence. Estimates of the current covid-19 reproduction rate range from 0.99 to 1.05. The case fatality rate remains low, at 1.58%, and health worker deaths have been few.

KwaZulu-Natal province in the east is the newest epicentre. Large rural funerals, a Zulu tradition, are facilitating the disease's spread, warned provincial premier Sihle Zikalala. "The picture has dramatically changed, we have now arrived at a point where almost everybody knows somebody who has been infected," Zikalala said. "KwaZulu-Natal is now in the eye of the storm."

1 South African Medical Research Council. Report on weekly deaths in South Africa. 22 July 2020. <https://www.samrc.ac.za/reports/report-weekly-deaths-south-africa?bc=254>

2 Parpia AS, Ndeffo-Mbah ML, Wenzel NS, Galvani AP. Effects of response to 2014-2015 Ebola outbreak on deaths from malaria, HIV/AIDS, and tuberculosis, West Africa. *Emerg Infect Dis* 2016;22:433-41. doi: 10.3201/eid2203.150977 pmid: 26886846

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