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Data in the time of COVID-19: The country has passed its peak

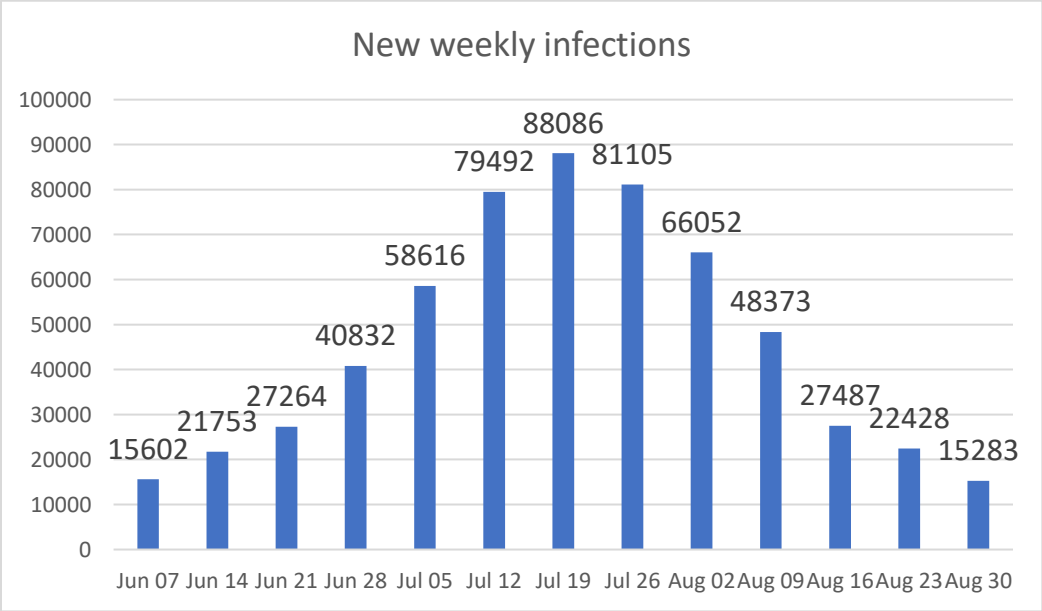
New infections of the Novel Coronavirus on the 1st of September have decreased to less than a tenth of what it was during the peak of infections. Despite the country entering level 2 regulations and greater social contacts occurring, infection numbers continue decreasing. All indicators are that South Africa has passed its worst with current known active cases the lowest in two months. However, the daily deaths remain over hundred per day.

Important data since the first case of Covid 19 was diagnosed in SA:

Total tests done to date	3 705 408
Total positive tests	628 259
Positive test rate	17,0%
Total recoveries	549 993
Recovery rate	87,5%
Total active cases	64 003
Total deaths	14 263
Death rate	2,27%

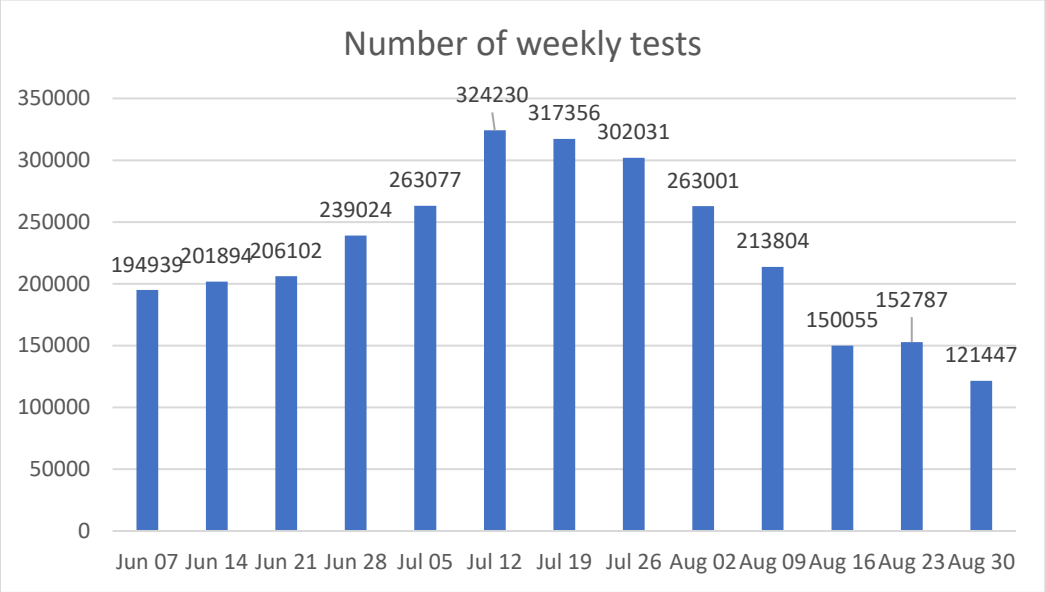
Infection trends

New weekly infections have decreased in the South Africa over the last month.



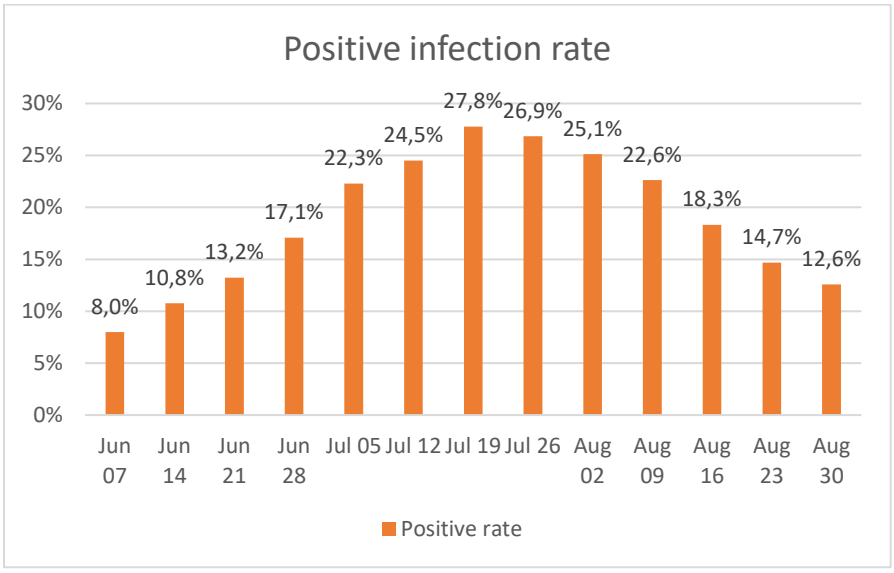
Data source: www.covid19sa.org

Weekly infections for the week ending 30th of August is 17,3% of what it was in the peak in mid-July and is now lower than what it was in May. These are infections that are known positive cases. There may be asymptotic individuals who may not be seeking medical help and hence are not counted in the newly infected cases. This decrease in known positive infections may be driven by the number tests currently conducted in the country.



Data source: www.covid19sa.org

The number of tests conducted have decreased to 37,4% of what it was in mid-July. Naturally, this raises the questions whether the number of known new infections have decreased as a result of lower number of tests or whether infection rates have dropped. The answer may lie in analysing the above two graphs in a different fashion.

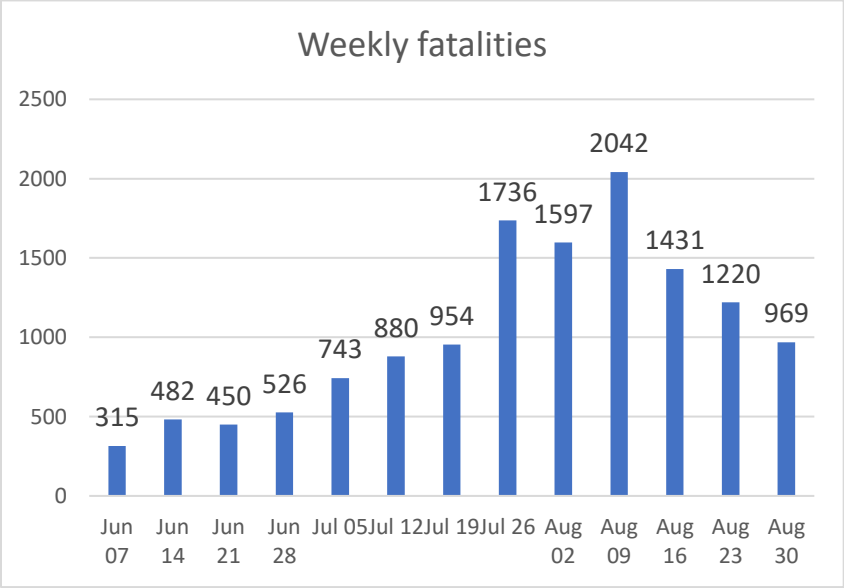


Data source: www.covid19sa.org

The figure above shows the number of known weekly positive cases (the first graph) as a proportion of the number of weekly tests (the second graph). The positive infection rate has decreased from a peak of 27,8% at its peak to 12,6% at the end of August. The graphs also indicate that despite a slight increase in the number of tests from the week ending 16th of August to the subsequent week, the number of infections had decreased by approximately 5000 cases. The decreasing trend in the positive infection rate from mid-July is an indication that the number of positive cases is decreasing faster than the number of tests conducted and hence, the latter's decrease may be a result of fewer patients requiring tests.

Fatalities data

The number of weekly fatalities remain high despite the decrease since the peak in fatalities.

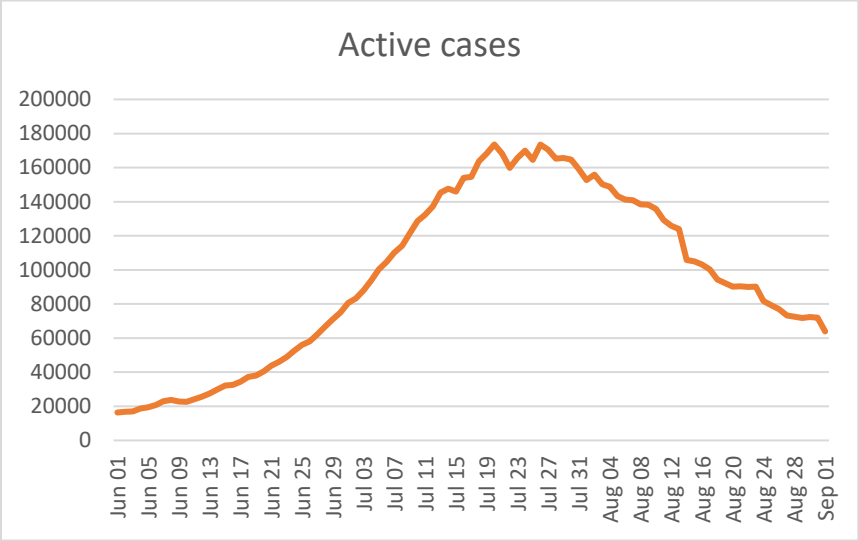


Data source: www.covid19sa.org

Weekly fatalities peaked during the week ending 9th of August, i.e. three weeks after the peak in positive infections. Fatalities lag infections due to the time it takes for cases to be concluded (i.e. recovered or death). Fatalities for the week ending 30th of August is 47,4% of the number seen during the peak in weekly fatalities in early August. The country would continue experiencing high number of fatalities as cases work through the system from infection to either recovery or fatality.

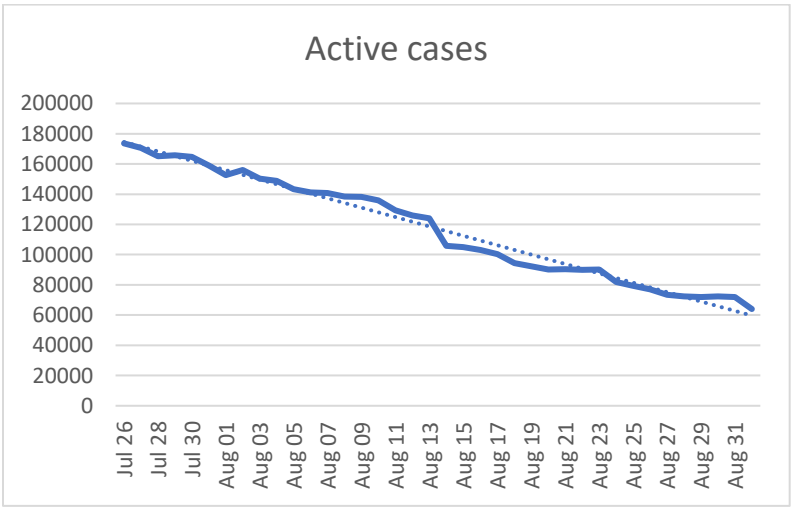
Recovery trends

Active cases are those that have not either recovered or resulted in death. The number of active cases has decreased since its peak.



Data source: www.covid19sa.org

Active cases at the end of August are 36,9% of what was seen during its peak on 26th of July. Active cases consist of those who were infected in the past and whose cases have not concluded as well as those new infection cases. Hence, this data holds information on both recovery rates as well as new infection rates.



Data source: www.covid19sa.org

The figure above indicates there is a negative trend in active cases since July 26th. The gradient of the above graph indicates the average daily decrease in the number of active cases (approximately 3100). This approximates to another three weeks before much of the current positive patients' cases reach conclusion with active cases stabilising before the end of September, assuming that the country does not experience a second wave of infections.

Final remarks

The number of new infections and the number of active cases indicates that the country has reached and passed its peak. While the number of weekly deaths remain high, this will continue decreasing in line with a lag in the number of positive cases. The overall trends in the country indicate it is safe to open the economy up further.

Despite the passing of the peak, social distancing and other measures must be continued to be observed as second wave is possible. This was seen in other countries.