

04 May 2020

His Excellency, President Cyril Ramaphosa,
Chair of the National Command Council on COVID-19
Union Buildings, Private Bag X1000, Pretoria, 0001

[Electronic message to: malebo@presidency.gov.za](mailto:malebo@presidency.gov.za)

RE: The Mortality and Economic Effects of COVID-19: Datasets for decision-making

Dear Mr. President,

While we are acutely aware that you are in the midst of the healthcare crisis presented by the COVID-19 pandemic, we write to you with a deep sense of concern and dire urgency as it becomes increasingly clear that the consequences of the continued lockdown are extreme and threaten the very viability of South Africa and our fragile economy.

We are a concerned group of professionals, comprising:

- four actuaries,
- an economist,
- a doctor,
- two lawyers,
- a statistics lecturer and;
- a data specialist

As a well-resourced team who have been monitoring COVID-19 and researching both its mortality and economic effects, we present our data and analysis to you with an urgent appeal: to revise the current approach to lockdown.

Using commercially tested actuarial principles, we have been able to estimate the impact of the lockdown's economic contraction on South Africans' mortality, or the 'life-years lost', which equate to three orders of magnitude higher than the life-years that could plausibly be saved by the lockdown.

The aforementioned concept of life-years lost seeks to understand the reduction in life expectancy as a direct result of contracting COVID-19, on different demographics within our society. It also takes into account the reduction of life expectancy as a result of the economic damage and/or hardships caused by the lockdown, on the same set of demographics in society.

These two sets of data of reductions of life expectancy are measured against each other to determine which scenario would be more damaging to people and the country.

This research with regards to the life-years lost combines four threads:

1. Epidemic: projection of deaths by population segment using empirical distribution techniques that mirror real-world experience elsewhere.
2. The life years saved analysis: which entails analysis of the impact of hospital overcrowding on avoidable fatalities and the pre-COVID-19 state of health of those who die.
3. The economic impact of lockdown.

4. The life-years lost analysis: which uses established actuarial techniques to translate economic contraction into mortality impact.

This research document is not intended to be a judgement or indictment of what has come before us. Six weeks ago, data was sparse and concerning. A rapid lockdown was a prudent decision at the time. Yet we should not anchor ourselves to the lockdown but rather consider the best next action, taking into account the new and developing data available today.

The consequences of the continued lockdown should be measured against the economic costs and second order impact. Many people are quantifying the current spread of the virus, but not the impact of a longer-term humanitarian disaster. We attempt to plug this gap with our actuarial analysis, which can help provide improved, data-led decisioning.

In the meantime an economic catastrophe threatens this country. The current response to COVID-19 is exhausting the engine of our economy so fast that, by the time the statistics emerge to quantify its full extent, it may be too late to rectify.

We would like to avail our research and data, and work with you to stop the humanitarian crisis ahead of us before it is too late.

As such, we would humbly request an urgent engagement with the Government to further explain our research and what we believe is the most prudent strategy to adopt to ensure that we mitigate the risk of the life-years lost as a result of the economic harm caused by the lockdown.

We stand ready to deploy our skills and analysis to the benefit of the nation. Our analysis is appended to this letter.

We trust our request will receive due consideration and would appreciate an acknowledgement of receipt together with a possible date at which we can present our critical findings.

Kind Regards



Nick Hudson, on behalf of Pandemic ~ Data and Analytics (PANDA)