COVID-19 When is a disaster a disaster?

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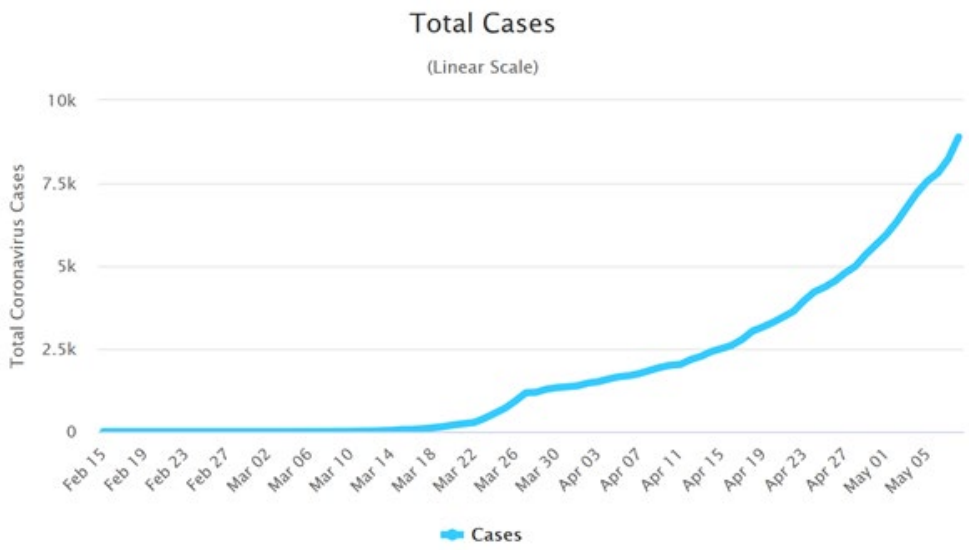
Introduction

The first Covid-19 case in South Africa was reported on 5 March 2020. Since then the number of reported infections has risen to 8232 (at 29 April 2019). In response to the arrival of the virus to South Africa the government on 15 March 2020 declared a national state of disaster in terms of the National Disaster Management Act 57 of 2002. At the time that the state of disaster was declared there were 51 reported Covid-19 cases of which 13 were newly imported. Some of the measures introduced in terms of the declaration were immediate travel restrictions and the closure of schools. On 23 March 2020, the President announced a general lockdown effective from 26 March 2020. On 23 March 2020, the reported number of Covid-19 cases were 274. No deaths had occurred at the time of the lockdown announcement. On 9 April 2020, the lockdown was extended to 1 May 2020. At the date of extension 1845 cases were reported with 18 deaths. Recently the lockdown was relaxed allowing return to work of certain workers and exercise but introducing a curfew.

In this article a collating of facts and information on Covid-19 is undertaken without attempting to necessarily create a strictly scientific basis for reviewing and solving the dilemma and problems that the pandemic has created. It is rather an exercise in appeasing a personal unease over the over-emphasis by the media and governments of the pandemic and its projected effects and the manner that it is being dealt with. In doing so, use has been made of verbatim replication of some news reports, articles, and other information.



Worldometer: South Africa Covid-19

COVID-19 THREAT

Section 2

Disaster Management Act of 2002

Section 1 of the Disaster Management Act 57 of 2002 (DMA) provides that: "disaster" means a progressive or sudden, widespread or localised, natural or human-caused occurrence which- (a) causes or threatens to cause-

(i) death, injury or disease;
(ii) damage to property, infrastructure or the environment;
(iii) disruption of the life of a community;
(b) is of a magnitude that exceeds the ability of those affected by the disaster to cope with its effects using only their own resources.

An analysis of this definition displays the following requirements:

- It must be an occurrence
- Which is progressive or sudden and
- Causes or threatens to cause
- Death, injury or disease, damage to property, infrastructure or the environment, disruption of community life
- It must be of sufficient magnitude that the affected cannot cope with its effects using their own resources.

Applied to Covid-19 the virus to be a disaster must be a progressive or sudden, wide-spread or localised natural or human-caused occurrence which threatens disease or death of a magnitude exceeding the resources of those affected by it.

Covid-19: Characteristics

Covid-19 is defined by Merriam-Webster as: "a mild to severe respiratory illness that is caused by a coronavirus (Severe acute respiratory syndrome coronavirus 2 of the genus Beta coronavirus)."

Covid-19: Transmission

The virus is chiefly transmitted by contact with infectious material (such as respiratory droplets) or with objects or surfaces contaminated by the causative virus, and is characterized especially by fever, cough, and shortness of breath and may progress to pneumonia and respiratory failure.

High-risk transmission

- Lives in the same household as a COVID-19 case;
- Had direct physical contact with a COVID-19 case (e.g. shaking hands);
- Had unprotected direct contact with infectious secretions of a COVID-19 case (e.g. being coughed on, touching used paper tissues with a bare hand);
- Had face-to-face contact with a COVID-19 case within 2 metres and for longer than 15 minutes;
- Was in a closed environment (e.g. classroom, meeting room, hospital waiting room, etc.) with a COVID-19 case for 15 minutes or more and at less than 2 metres;
- Who is a healthcare worker (HCW) or other person providing direct care for a COVID-19 case, or laboratory workers handling specimens from a COVID-19 case without recommended PPE or with a possible breach of PPE;
- Came into contact in an aircraft sitting within two seats (in any direction) of the COVID-19 case, travel companions or persons providing care, and crew members serving in the section of the aircraft where the index case was seated.[1]

[1] ECDC Technical Report accessible at www.ecdc.europa.eu › sites › default › files › documents

Low-risk transmission

A low risk of transmission exists when a person:

- Was in a closed environment with a COVID-19 case for less than 15 min or at more than 2 metres;
- Had face-to-face contact with a COVID-19 case for less than 15 min and at less than 2 metres and
- Travelled with a COVID-19 case in any kind of conveyance.

Covid-10 severity and hospitalisation

Severity

The incubation period is between 2-14 days. 28% of patients experience mild symptoms, 62% moderate symptoms and 10% severe. According to experts 80% of patients have light cold-like symptoms, 20% of the 80% infected, severe cold-like symptoms and 5% of the 20% end up in hospital.[2] The government's "Don't Panic" site on the Covid-19 website states: "82% of COVID-19 cases are mild: patients only experience a slight fever, fatigue and a cough. Only about 6% of patients need intensive care. Most people can stay at home and get better without hospital treatment."

Hospitalisation

Data from China suggest that 15–20% of COVID-19 cases require hospitalisation. In Italy and Spain, 40–55% of COVID-19 positive cases have been hospitalized.[3] In America the hospitalisation rate among patients identified through COVID-NET for the 4-week period ending March 28, 2020, was 4.6 per 100,000 population. Hospitalisation rates increased with age, with a rate of 0.3 in persons aged 0–4 years, 0.1 in those aged 5–17 years, 2.5 in those aged 18–49 years, 7.4 in those aged 50–64 years, and 13.8 in those aged ≥65 years. Rates were highest among persons aged ≥65 years, ranging from 12.2 in those aged 65–74 years to 17.2 in those aged ≥85 years. More than half (805; 54.4%) of hospitalisations occurred among men; COVID-19-associated hospitalisation rates were higher among males than among females (5.1 versus 4.1 per 100,000 population). Among the 1,482 laboratory-confirmed COVID-19–associated hospitalisations reported through COVID-NET, six (0.4%) each were patients aged 0–4 years and 5–17 years, 366 (24.7%) were aged 18–49 years, 461 (31.1%) were aged 50–64 years, and 643 (43.4%) were aged ≥65 years.[4] Approximately 90% of hospitalized patients had one or more underlying conditions, the most common being obesity, hypertension, chronic lung disease, diabetes mellitus, and cardiovascular disease. 90% of persons hospitalised have one

[2] Inperking berus op foutiewe data Netwerk 24, 24 April 2020 accessible at https://www.netwerk24.com/Nuus/Gesondheid/inperking-berus-op-foutiewe-data-20200425.

[3] WHO Europe Creating surge capacity for acute and intensive care. Recommendations for the WHO European Region (6 April 2020) accessible at https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=2ahUKEwjnzbjV0o_pAhWAShUIHRI5DV8QFjABegQIARAB&url=http%3A%2F%2Fwww.euro.who.int%2F__data%2Fassets%2Fpdf_file%2F0006%2F437469%2FTG2-CreatingSurgeAcuteICUcapacity-eng.pdf&usg=AOvVaw38LNHBcRZfdtWONmjbHtU1.

[4] Fn 3

or more underlying medical conditions. These findings underscore the importance of preventive measures (e.g., social distancing, respiratory hygiene, and wearing face coverings in public settings where social distancing measures are difficult to maintain) to protect older adults and persons with underlying medical conditions.[5] In the UK approximately 7% of Covid-19 patients are admitted to hospital.[6]

In South Africa on 15 April 2020, 62 patients out of 909 (7%) positive Covid-19 tested patients were hospitalised in Gauteng. This accords with the UK hospitalisation rate. On 27 April 2020, nationally 317 of the 4793 cases (6%) reported on that day were hospitalised and 216 of 7808 (3%) cases were admitted to hospital for the period pre-ceding 6 May 2020.[7]

Intensive care

5% of admitted cases in China required intensive care. In Italy and Spain 7–12% required admission to intensive care units. Estimates from China also suggest that patients in intensive care units (ICUs) require approximately 13 days of respiratory support, while data from Italy show that 10–25% of patients will require ventilation, and some patients will need ventilation for several weeks. The UK had 3883 patients out of 19000 in ICU on 9 April 2020. The reasons for national variations in hospital admissions, severity and mortality rates point to different population structures, hospitalisation guidelines and with around 15% of cases presenting with severe symptoms and thresholds, hospital capacities, testing practices, data collation methods, implementation of infection prevention and control (IPC) measures, time to receiving care, as well as the risk factors among the infected persons (age and comorbidities).[8]

In South Africa, a total of 42 patients were admitted to ICU countrywide as at 27 April 2020. This is out of a possible 4793 positive Covid-19 cases which is 1% of the total and 13% of patients for that day. On 06 May 2020 there were 65 ICU patients out of 7808 cases (0,83%).[9]

Covid-19 Basic Reproductive Number – R_o

R_o is the basic reproduction number of an infectious agent and is the average number of infections one case can generate over the course of the infectious period, in a naïve, uninfected population. It follows that Ro is a crucial element in the prediction of the rate of infection and number of deaths of infected patients. Initially the value was estimated to be 1.4-2.5. The value for the common flu is accepted as 1.3. Comparing the various versions of the calculation of this value the reproduction number of Covid-19 was found to vary, reflecting the dynamics of transmission of the coronavirus outbreak as well as the dynamics of case reporting.[11] The reproduction number tended to increase over the time in parallel with the increase in cases being reported and the findings were highly sensitive and dependent on the period in which the estimate was made and on the data available at that given time. Results tend to show that the rate may vary from 1.1 to 4,6 depending on the method and data used. An updated estimation indicates that the effective daily reproduction ratio has already fallen below 1 and that while the epidemics will continue to grow, the epidemic will peak soon. An outbreak with a reproductive number of below 1 will gradually disappear. [12]

[5] CDC Hospitalisation Rates and Characteristics of Patients Hospitalized with Laboratory-Confirmed Coronavirus Disease 2019 — COVID-NET, 14 States, March 1–30, 2020 accessible at https://www.cdc.gov/mmwr/volumes/69/wr/mm6915e3.htm.
[6] CEBM James Mahon, Tom Jefferson, Carl Heneghan Are COVID-19 patients in hospital or admitted to hospital? accessible at https://www.cebm.net/Covid-19/are-Covid-19-patients-in-hospital-or-admitted-to-hospital/
[7] Media release Minister of Health 06/05/2020.
[8] Fn 2
[9] Minister of Health press release,
[10] Worldometer COVID-19 Coronavirus Pandemic at https://www.worldometers.info/coronavirus/?utm_campaign=homeADemocracynow(2020)%20dvegas1?#repro.
[11] See Basic Reproductive Number accessible at https://en.wikipedia.org/wiki/Basic_reproduction_number.
[12] An updated estimation of the risk of transmission of the novel coronavirus (2019-nCov). Available from: https://www.researchgate.net/publication/339185300_An_updated_estimation_of_the_risk_of_transmission_of_the_novel_coronavirus_2019-nCov [accessed May 01 2020].

Covid-19 R_0

China	1-5%[13]
France	3,3 - 0,5[14]
Germany	1[15]
Italy	3,6[16]
Spain	4.5[17]
UK	5,1[18] now 1[19]
USA	2-2,5[20]
South Africa	0,05[21]

[13] https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30287-5/fulltext
[14] http://www.rfi.fr/en/france/20200421-only-6-per-cent-french-infected-coronavirus-when-lockdown-eased
[15] https://www.aa.com.tr/en/europe/Covid-19-transmission-rate-increases-in-germany/1821325
[16] https://www.pnas.org/content/early/2020/04/22/2004978117
[17] https://www.statista.com/statistics/1104274/Covid-19-infections-every-100-000-people-by-region-in-spain/
[18] https://www.medrxiv.org/content/10.1101/2020.04.07.20052340v1.full.pdf+html
[19] https://www.itv.com/news/2020-04-28/coronavirus-q-a-what-is-the-r-value/
[20] https://www.businessinsider.com/us-Covid-19-herd-immunity-2020-4?IR=T
[21] Based on new cases as at 1 May 2020.
[22] https://en.wikipedia.org/wiki/Basic_reproduction_number

Comparatively Covid-19 is not as infectious as some well-known infectious diseases:

Values of R_0 of well-known infectious diseases

Disease	**Transmission**	**R_0**
Measles	Aerosol	12–18
Chickenpox (varicella)	Aerosol	10–12
Mumps	Respiratory droplets	10–12
Pertussis	Respiratory droplets	5.5
Polio	Faecal–oral route	5–7
Rubella	Respiratory droplets	5–7
Smallpox	Respiratory droplets	3.5–6
HIV/AIDS	Body fluids	2–5
SARS	Respiratory droplets	2–5
Common cold	Respiratory droplets	2–3
Diphtheria	Saliva	1.7–4.3
Ebola (2014 Ebola outbreak)	Body fluids	1.5–1.9
COVID-19	Respiratory droplets	1.4–5.7
Influenza (1918 pandemic strain)	Respiratory droplets	1.4–2.8
Influenza (2009 pandemic strain)	Respiratory droplets	1.4–1.6
Influenza (seasonal strains)	Respiratory droplets	0.9–2.1
MERS	Respiratory droplets	0.3–0.8[17]

Covid-19 morbidity

The frequently reported number of Covid-19 infections and deaths mask an important fact that the World Health Organisation (WHO) lists fever, tiredness, dry cough, nasal congestion, runny nose, sore throat, or diarrhoea as some of the symptoms of Covid-19. It says that about 80% of people who contract the disease recover from it without needing special treatment. The Worldometer recovery figure at 08/05/2020 was 83%. [23]

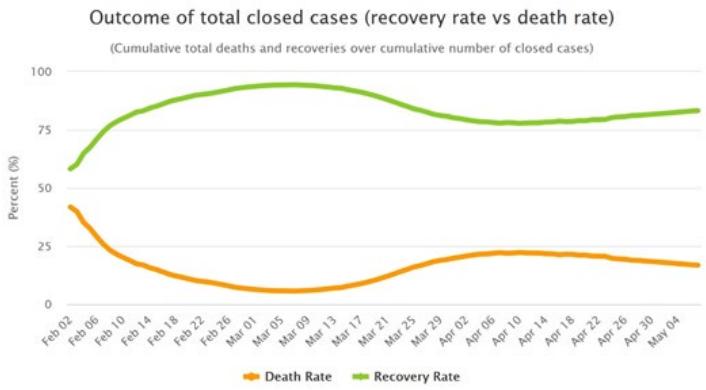
The reported number of deaths seem to create a picture of a particularly deadly pandemic. On closer inspection of currently available information this is not the case. Global deaths are now up to 276 253 out of a global population approaching 8 billion people.[24] Taking the statistics of those countries with the highest number of reported Covid-19 cases, the average case mortality rate is 0,38 and the average per capita rate 0,0841%. [25] This despite a global infection of 4 million cases. In South Africa, the pandemic is in its 64th day with 153 confirmed fatalities and a mortality of 0,02. [26] This presents a picture of high rate of infection but with relatively low morbidity. It is appreciated that this method of indicating morbidity does by no means indicate the final or accurate number but it is nonetheless an indicator that the virus is not as deadly as the politicians and the media would have it. [27]

[23] https://www.worldometers.info/coronavirus/coronavirus-cases//
[24] Compare this to the 1918 H1N1 pandemic where there were 500 million infections and 50 million deaths out of a global population of 1,8 billion.
[25] See Appendix A.
[26] As at 8 May 2020.
[27] See 2019-Novel Coronavirus (2019-nCoV): estimating the case fatality rate – a word of caution - Battegay Manue et al., Swiss Med Wkly, February 7, 2020

Other epidemics and health conditions

Section 3

Worldometer 8 May 2020 Global Position



Ordinary influenza

Influenza or flu causes 128,000 infections and 11,800 deaths annually (30 deaths per day) in South Africa. A 2019 study of South African data from 2013 to 2015 estimated the annual cost of treating influenza at R4-billion. The study estimated annual absenteeism and years of life lost (YLL) associated with influenza at 13.2 million days and 305,000 years, respectively. South Africa, a middle-income country of 54.8 million people in 2015, over 10 million mild, 128,000 severe-non-fatal and 11,000 fatal influenza-associated illness episodes are estimated to occur annually with a heavy burden among young and old individuals and persons with chronic medical conditions, including HIV and tuberculosis infection. During the influenza season (usually between May and September) in South African hospitals, approximately 14% of inpatients with lower respiratory tract infection and 25% of patients with influenza-like illness will test positive for influenza. An estimated 47,000 episodes of influenza-associated severe acute respiratory illness occur annually, of which 22,481 result in hospitalisation. The mortality rate is 0,1%. [28] Globally the WHO estimates annual seasonal influenza related deaths at 290 000 - 650 000. [29]

Tuberculosis

Globally South Africa is ranked the country with the third highest number of TB patients and if corrected for population size, South Africa moves up to first place in the ranking.[30] According to the WHO in 2017 SA had 322 000 active TB cases. WHO estimates that SA has 1000/100 000 TB cases and that 124 000 annually die from TB (±330 daily). [31] The cost of TB diagnosis and treatment in SA could be catastrophic and drive the 'medi-cal poverty trap'. For those starting on treatment, the costs associated with a TB episode totalled 22% of the average pre-symptom individual income.[32] The government allocation for the joint TB/HIV program for 2018/2019 was estimated at R20,7 billion.[33]

[28] Daily Maverick 7 February 2020 accessible at https://www.dailymaverick.co.za/article/2020-02-07-the-familiar-old-virus-that-kills-thousands-of-south-africans/.
[29] Covid-19 globally to date: 263 000.
[30] Kana B, Churchyard G. Tuberculosis: The global killer. S Afr J Sci. 2013;109(9/10), Art. #a0036, 2 pages. http://dx.doi.org/10.1590/sajs.2013/a0036.
[31] Former Minister of Health during a presentation for StopTB in 2014.
[32] Foster et al The economic burden of TB diagnosis and treatment in South Africa Social Science & Medicine Volume 130, April 2015, Pages 42-50 accessible at https://doi.org/10.1016/j.socscimed.2015.01.046.
[33] Simelane S, Ndlovu N, Meyer-Rath G, Guthrie T (2018). Keeping track of HIV and TB spending in South Africa: 2013/14 to 2020/21 Expenditure and Budget Review: Occasional Paper 2018-1. CEGAA accessible at https://www.google.com/l?sa=t&rct=j&q=&esrc=s&source=web&cd=13&ved=2ahUKEwjfr5f0pZDpAhU1QRUIHSs0CeoQFjAMegQIARAB&url=http%3A%2F%2Fcegaa.org%2Fresources%2Fdocs%2FCEGAA_HERO_Occasional_Paper_2018-1_Final19.10.18.pdf&usg=AOvVaw2lJCTOSybOAsrwj19-lHJa.

HIV and Aids

South Africa has the biggest HIV epidemic in the world, with 7.7 million people living with HIV. HIV prevalence among the general population is high at 20.4%. South Africa's National Strategic HIV, STI and TB Plan 2017-2022 is predicted to cost a total R207 billion. Considering this, in 2017 the South African government increased its budget allocation for HIV and AIDS, despite general budget reductions across the health sector. [34] The number of annual deaths attributable to AIDS in 2017 was 126,755 or 25.03% (46 per day) of all South African deaths.

1918 H1N1 (Spanish influenza) pandemic

In March 1918, an international influenza pandemic broke out, that led to 500 million infections and the deaths of 50 million people worldwide. The pandemic spread simulta-neously in Europe, Asia, and North America over a twelve-month period between the last months of 1918 and the beginning of 1919. The First World War, while not the direct cause of its outbreak, contributed to its rapid spread worldwide. Soldiers, malnourished and battle weary were particularly vulnerable to infection. As they were constantly being moved between different theatres of war across the globe, they spread the virus to many countries, including South Africa. By the end of 1918, more than 127 000 Blacks and 11 000 Whites had succumbed to the epidemic. While some controversy exists as to the exact source of infection and its spread in South Africa, there is general agreement that the participation of soldiers in the War was a direct contributory factor in its arrival in South Africa. Its arrival here was initially linked to two ships, the Jaroslav and the Veronej, which arrived in Cape Town on the 13 and 18 September 1918 with members of the South African Native Labour Contingent (SANLC) on board. It was established that both ships had docked at Sierra Leone, one of the places regarded as a central point of infection. In general, about 500 000 people died of the epidemic in South Africa, the fifth hardest hit by the pandemic worldwide. Several factors contributed to the rapid spread of the epidemic throughout South Africa. Firstly, South Africa had several ports and harbours from which sailors and soldiers spread the infection. Secondly by 1918, South Africa had a well-developed railway network of 10 000 miles, making it easier for the epidemic to penetrate the most remote areas. Thirdly the migrant labour system ensured that the virus travelled with infected miners on their way to the mines or home. [35]

Multiple factors contributed to morbidity and mortality of the 1918 H1N1 pandemic. Virus transmission was facilitated by rampant overcrowding in military training camps and most major cities. Tightly spaced waves of respiratory disease, three within ten months overwhelmed available resources and left little time to replace medical personnel who had succumbed to the disease. The pandemic created a unique W-shaped mortality curve with high frequency of secondary pneumonia and subsequent mortality among young adults.[36] The current world's population is about 8 billion people with significantly lower death rates from COVID-19 overall. Although the pandemic is far from over, the lower figure is likely related to greater awareness of how viruses and pandemics work, better healthcare, both in terms of access to hospitals, antibiotics, antiviral drugs, and other approaches to treating diseases. In fact, although healthcare facilities are being stretched thin by COVID-19 in many countries, it was quite worse in 1918, as hospitals were dealing with mass casualties and injuries from the war, and many physicians were with the troops, leaving medical students to take care of the influenza patients. On the other hand, we have a far more connected

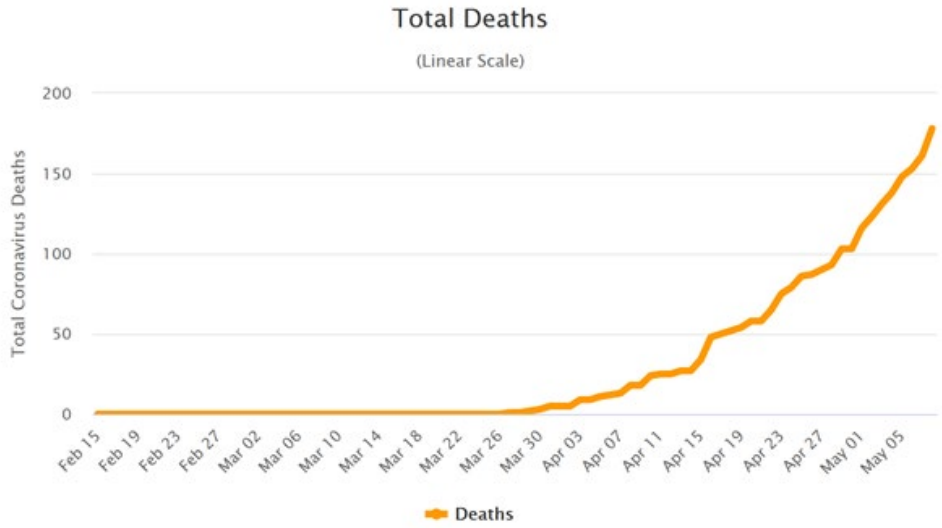
[34] AVERT HIV and AIDS in South Africa accessible at https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/south-africa.
[35] The Influenza epidemic South African History on Line accessible at https://www.sahistory.org.za/article/influenza-epidemic.
[36] Jester BJ, Uyeki TM, Patel A, Koonin L, Jernigan DB. 100 Years of Medical Countermeasures and Pandemic Influenza Preparedness. Am J Public Health. 2018;108(11):1469-1472. doi:10.2105/AJPH.2018.304586

world with air travel and denser populations, which make the spread of COVID-19 easier and faster. With all the similarities, it should be emphasized that there are several significant differences between the two pandemics. First off, simply, is that COVID-19 is not influenza, it is more like a chronic acute pneumonia. They are both caused by novel viruses, but different types of viruses with different methods of action and infectiousness. [37]

Normal morbidity

495 370 South Africans annually die from natural causes and 51 242 from non-natural causes. The main causes are TB (6,5%), Diabetes mellitus (5,5%), Heart disease (5,1%), Cerebrovascular disease (5,1%), HIV (5,1%), Hypertensive disease (4,4%), Influenza and pneumonia (4,3%), Other viral diseases (3,6%), Ischaemic heart disease (2,8%), Chronic lower respiratory disease (2,8%) Other natural causes (43,9%). [38]

Worldometer: South African Covid-19



Globally the usual morbidity for the period indicated is as follows:

GLOBAL DEATHS: January 1st - March 30th, 2020	
35,016	Coronavirus
75,645	Mothers During Childbirth
118,980	Seasonal Flu
240,056	Malaria
262,441	Suicides
330,367	Traffic Accident
411,415	HIV/AIDS
612,105	Alchohol
1,223,439	Smoking
2,009,990	Cancer
3,177,081	Communicable Diseas
10,402,251	Abortions

Source: www.worldometer.info

[37] Mark Terry Compare 1918 Spanish Fly Pandemic vs Covid-19 Biospace accessible at https://www.biospace.com/article/compare-1918-spanish-influenza-pandemic-versus-Covid-19/.

[38] StatsSA Statistical Release P03039.3 Mortality and causes of death in South Africa, 2016: Findings from death notification reported in Businesstech of 27 March 2019 accessible at https://businesstech.co.za/news/lifestyle/234261/this-is-what-is-killing-south-africans/.

Countermeasures

Section 4

Countermeasures

Countermeasures that may be employed to deter the spread of a pandemic are:

Lockdown

This is where governments order their citizens to stay at home and only take a minimum of necessary trips outside, while announcing police enforcements and/or fines for people failing to meet the requirements.

Social distancing

A measure where a physical distance between people is maintained and reducing the number of times people come into close contact with each other. This measure was employed by Sweden and the Netherlands. The results do not deviate very markedly from the results of full lockdown.[39]

Treat, test, and locate

This method has been applied with success in South Korea.[40]

Personal measures

- Regularly and thoroughly clean hands with an alcohol-based hand rub or wash them with soap and water.
- Maintain at least 1 metre (3 feet) distance between yourself and others.
- Avoid going to crowded places.
- Avoid touching eyes, nose, and mouth.
- Make sure you, and the people around you, follow good respiratory hygiene. This means covering your mouth and nose with your bent elbow or tissue when you cough or sneeze. Then dispose of the used tissue immediately and wash your hands.
- Stay home and self-isolate even with minor symptoms such as cough, headache, mild fever, until you recover. Have someone bring you supplies. If you need to leave your house, wear a mask to avoid infecting others.
- If you have a fever, cough and difficulty breathing, seek medical attention, but call by telephone in advance if possible and follow the directions of your local health authority.
- Keep up to date on the latest information from trusted sources, such as WHO or your local and national health authorities.

Of all the measures lockdown, though accepted to be effective to initially retard spread, is also the most invasive and costly.

[39] See Appendix A.
[40] Idem

Lockdown costs

Section 5

Lockdown costs

South Africa faces three interrelated problems. These are the public health threat from the Covid-19 pandemic, the economic and health effects of the lockdown, and a range of intractable economic problems not directly due to the current pandemic. These include high unemployment, low economic growth and falling per capita income. The available evidence on the Covid-19 pandemic suggests that any initial containment of the disease through a lockdown will be short-lived. Also, it is likely to result in a rebound of cases in the absence of aggressive community-wide screening for Covid-19 infectious cases, isolation of the identified cases and quarantine of their close contacts for at least 14 days. South Africa may find itself permanently harmed by the simultaneous destruction of both the demand and supply sides of the economy under an extended generalised lockdown. This will have other unintended long-term health and economic consequences. For example, an extended lockdown could result in the undermining of other health services, such as the immunisation of children and TB patients. Early forecasts suggest significant economic disruption from the current lockdown, which is costing the economy an estimated R13 billion per day. Preliminary projections by the South African Reserve Bank indicate that South Africa could lose 370,000 jobs in 2020. Projections by private banking analysts (based on the initial 21-day lockdown) suggest a GDP contraction of 7% during 2020, leading to a fiscal deficit of 12% of GDP (forecast at 6.8% in the 2020 budget) and a debt-to-GDP ratio in excess of 81% in 2021. This means that the country's already limited public finances will be further constrained. [41]

[41] Taken from Moneyweb Blueprint for a Lockdown Replacement 11 April 2020 accessible at https://www.moneyweb.co.za/moneyweb-opinion/soapbox/a-blueprint-for-a-replacement-for-lockdown/.

Government's decision

Section 6

Data used

The basis on which the Government designed its lockdown strategy has been questioned. The government's assumptions were that:

- Between 87 900 and 351 000 would die if no action is taken.
- 87 900 would die if there is a 10% infection rate;
- 176 000 deaths if 20% people are infected and
- 351 000 deaths with 20% infection.

The Government's decision to extend the lockdown on 9 April 2020 was done against the backdrop of 1934 cases, a daily increase of 84 infections and 18 deaths and on the assumption that there would be between 87 900 and 351 000 deaths should the Govern-ment not take preventative steps to prevent an overburdening of the public health system. It is also stated that the peak will be reached between July and early September 2020 which is 6 months from date of the first case. This assumption was made based on data from Hubei province in China. WHO regional director, Dr Matshadiso Moeti, states that the Africa group's modelling shows that, in Africa, the peak of infection in any country typically happens between four to six weeks after widespread community transmission. Across the continent, about a third of the countries are at this point – with a third currently experiencing cluster infections. The final third is controlling the infections, she said.[42] The assumptions can be questioned for three reasons. First, Covid-19 has not anywhere in the world achieved a 10% infection rate.[43] Second, the pandemic's pro-gression and impact are strongly related to the demographic composition of the population, specifically, population age structure. Demographic science can provide new insights into how the pandemic may unfold and the intensity and type of measures needed to slow it down. Currently, Covid-19 mortality risk is highly concentrated at older ages, particularly those aged 80+ y.[44] Furthermore, the control of the Covid-19 epidemic is in many locations moving from a public-health strategy of containment to mitigation. A main control-strategy of Covid-19 is contact tracing. Its effectiveness depends on the pre-symptomatic and asymptomatic patterns of the disease. With 100% symptomatic cases, a Ro of 1.5 could be controlled with 50% of the contacts traced. With a Ro of 3.5, 90% is required. With pre-symptomatic and potential asymptomatic transmission, the effectiveness of contact tracing is reduced further. In Italy, for example, only one out of four cases are identified.[45] Thus, even for a low Ro and no pre-symptomatic transmis-sion, contact tracing will on its own not be able to contain the outbreak. In addition to isolation of ill persons, contact tracing and quarantining of all their contacts, to reduce community spread it will be necessary to strategically reduce contact-rates. By reducing contact rates, the growth-rate of the outbreak can be reduced. Controlling contact rates is key to outbreak control, and such a strategy depends on population densities.[46] Density is a factor in this pandemic, as it has been in previous ones. The very same clustering of people that makes our great cities more innovative and productive also makes them, and us, vulnerable to infectious disease. Yet, density is likely just one of several key factors that determine how vulnerable places are to the virus. Across the world, Covid-19 has taken root and hit hard in several types of places. One is large dense superstar cities like New York and London, with large flows of visitors and tourists, diverse global populations, and dense residential areas. A second is industrial centres like Wuhan, Detroit, and Northern Italy, which are connected through supply chains. The third is global tourist meccas like the ski slopes of Italy, Switzerland and France, and their counterparts in the Colorado Rockies. And in smaller communities, the virus targeted nursing homes and funeral parlours, and of course cruise ships, which are like dense small cities at sea.[47] Three, as Covid-19 is a completely new phenomenon models based on existing data and assumptions are now largely irrelevant. Prof Yaneer Bar-Yam is a Professor and President of the New England Complex Systems Institute says the following: "If you want to use science for policy, you have to check the assumptions. In this case, it is imperative to check the assumptions. It's a responsibility" and ""There are always scientific

[41] Taken from Moneyweb Blueprint for a Lockdown Replacement 11 April 2020 accessible at https://www.moneyweb.co.za/moneyweb-opinion/soapbox/a-blueprint-for-a-replacement-for-lockdown/.

assumptions made in scientific papers. Policy-makers have to know how to check those assumptions made and learn to evaluate the findings in light of those assumptions." He further states that in epidemiology, social science, and economics, statistical models are used widely for analysis. These models are adequate to find answers to certain questions. But, to model our world taking account of changes that may occur, we need more sophisticated models. No matter what models you use, you are selecting a group of variables that will give you the best picture of the answers that you seek. Depending on the data, with the right variables, you will gain the answers you are looking for. But, with the wrong variables, you can be drastically misled. For this reason he advocates the use of modelling complex systems.[48]

The most infections in South Africa occur in Cape Town, Durban and Johannesburg which are the South African business- and tourist hubs. The average overall geographic population density of countries with high Covid-19 infections and deaths is 166/km^2. Our overall geographic population density is 49/km^2. Foreign metropolitan areas are more highly and densely populated than Johannesburg (population 6 million) 2900/km^2, Cape Town (which has the most infections and a population of 5 million) at 1 530/km^2. London (population 9 million) has 10 000/km^2, New York (population 18 million) 10 000-30 000/km^2 and Wuhan (population 11 million) between 10 000 and 90 000/km^2 with an average of 9 000/km^2. Khayelitsha has a density of 10 000/km^2 but has a population of 600 000. Alexandra has a density of 42000/km^2 and a population of about 750 000. This simultaneously reflects the pool of possible infection in urban context and may be an explanation why our Covid-19 infection rate does not coincide with foreign experience.

Seriousness and level of infection

The actual average rate of infection since the first case reported on 5 March 2020 is 145per day out of a population of 59 million. 0,01319525% of the South African population have to date been infected. The international average for countries with high numbers of infection is 0,1934097%.[49] Another aspect of Government's control measure is the daily reporting of the increase in cases and death toll. The reality is that the number of infections is a misleading indicator of the severity of the problem as is the death toll. 80% of patients have slight symptoms and only 7% require medical attention while 2% may die. The South African death rate expressed as a number of positive cases is 0,02 and per capita 0,0003% (international comparison is 0,0841%).[50] Of the 90% all are health compromised individuals. Covid-19 deaths at this stage is statistically irrelevant against e.g. seasonal influenza where there are 30 daily deaths and even more so if TB deaths of 333 per day is considered.

Lockdown

The real purpose of a lockdown is to reduce reproduction – in other words, to reduce the number of people each confirmed case infects. The goal is to keep reproduction, or "R," below one (R<1) – with each case infecting fewer than one other person, on average. There are two routes to attempt to achieve this:

- Mitigation, slowing but not necessarily stopping epidemic spread – reducing peak healthcare demand while protecting those most at risk of severe disease from infection. This is done by isolating suspected cases and their households, and social distancing the elderly and people at highest risk of serious illness.
- Suppression, or basically, lockdown, which aims to reverse epidemic growth, reducing case numbers to low levels by social distancing the entire population "indefinitely" and closing schools and universities.[51]

[49] At 8 May 2020.
[50] Idem.
[51] Why lockdowns can halt the spread of COVID-19 accessible at https://www.weforum.org/agenda/2020/03/why-lockdowns-work-epidemics-coronavirus-covid19/

Less than a week ago, South Africa was warned that if the country recorded an average of more than 90 Covid-19 cases a week, the medical advice was to extend the lockdown again. The accepted measure rather than raw infection numbers is rather the R0. Both the UK[52] and Germany [53] use a R_0 figure of less than 1 to inform their decisions regarding the easing of lockdown. SA has not achieved an R_0 exceeding 1[54] but persists with a stringent lockdown regime. Lockdown without a well-orchestrated and aggressive testing tracing and isolation program will not achieve the desired results. Testing is important because asking people with mild symptoms just to stay home will lead to more infections in the household and community. If tested and positive, people can either be isolated in a facility (like in China/Vietnam) or put on strict home isolation (which they are more likely to adhere to if they are sure that they have the virus). When re-sources are limited and when the healthcare system is overloaded, however, you do not want a lot of healthy people coming to health facilities and risk-ing contagion. [55]

As far as testing is concerned the Government has to date [56] conducted a total of 292153 tests at an average of 4565 per day and has tested 0,50% of the population. Internationally the average number of tests are 3004621 and percentage population testing coverage in countries with high numbers of infections is 2,97%.

From the News 24 graphic lockdown has an initial beneficial effect but then subsequently there is consistent gradual growth possibly because of insufficient testing, tracking and tracing.

[52] What is the R value and why is the number one so important in stopping the spread of coronavirus? Accessible at https://www.itv.com/news/2020-04-28/coronavirus-q-a-what-is-the-r-value/
[53] Germany's R0 Coronavirus Experiment accessible at https://www.wsj.com/articles/germanys-r0-coronavirus-experiment-11588115565
[54] 7808 infections at an average of 135 per day.
[55] To test or not to test? Two experts explain COVID-19 testing accessible at https://www.weforum.org/agenda/2020/04/to-test-or-not-to-test-2-experts-explain-Covid-19-testing/
[56] 8 May 2020.

Alternative strategies

Sweden has, unlike many other countries, not imposed any lockdown, with most measures being voluntary. The Swedish constitution prohibits ministerial rule and mandates that the relevant government body, in this case an expert agency – the Public Health Agency – must initiate all actions to prevent the virus in accordance with Swedish law, rendering state epidemiologist Anders Tegnell a central figure in the crisis. The government can follow agency recommendations, as it has with legislation limiting freedom of assembly, temporarily banning gatherings of over 50 individuals, banning people from visiting nursing homes, as well as physically closing secondary schools and universities. Primary schools have remained open, in part to avoid healthcare workers staying home with their children. The Public Health Agency and government issued recommendations to: if possible, work from home; avoid unnecessary travel within the country; to engage in social distancing; and for people above 70 to stay at home, as much as possible. Those with even minimal symptoms that could be caused by COVID-19 are recommended to stay home. The 'karensdag' or initial day without paid sick-leave has been removed by the government and the length of time one can stay home with pay without a doctor's note has been raised from 7 to 21 days. Sweden began testing for

the virus in January, and by late April, approximately 120,000 tests had been performed. As of 7 May 2020, there have been 24,623 confirmed cases, of which 1,645 received intensive care, and 3,040 deaths related to COVID-19 in Sweden, with Stockholm County being the most affect-ted. [57]

The Netherlands also adopted a different approach and applied what they termed "intelligent lockdown". This consisted of strict social distancing rules. All large public events and gatherings were banned until 1 September 2020. Furthermore, in public space a distance of at least 1.5 metres between people not from the same household must be observed, and shops and other venues are to enforce this distancing among their visitors. Fines will be issued to those not complying with the new rules. Final examinations of secondary school were cancelled. Other measures were that schools and day-cares were closed, except for children whose parents work in the 'vital' sectors, like healthcare. People were required to work from home as much as possible. These measures also resulted in modified schedules for public transport, as much less transportation of individuals was necessary. [58]

South Korea introduced what was considered one of the largest and best-organised epidemic control programs in the world, along with Taiwan, Vietnam and Singapore. Different measures have been taken to screen the mass population for the virus and isolate any infected people as well as trace and quarantine those who contacted them, without further lockdown. The rapid and extensive tests taken by South Korea have been judged successful in limiting the spread of the outbreak, without using the drastic measure of quarantining entire cities.

Comparing the statistics of Sweden, the Netherlands and South Korea, the death rate (except South Korea) is marginally less favourable but the gain in prevention of economic harm considerable. The average death rate of these countries is 0,09 and per capita 0,0901%. The average for countries with high case numbers who employed lockdown is 0,25 and 0,0811%. The advantages of not shutting down an economy is obvious.

[57] Covid-19 pandemic in Sweden accessible at https://en.wikipedia.org/wiki/COVID-19_pandemic_in_Sweden
[58] COVID-19 pandemic in the Netherlands accessible at https://en.wikipedia.org/wiki/COVID-19_pandemic_in_the_Netherlands#Prevention_measures_and_response
[59] Number of deaths over number of cases.

Cost of lockdown

Given that the lockdown effectively closes down both the supply and demand sides of the economy, the loss of gross domestic product (GDP) is nearly complete – estimated roughly R13 billion per day. Over 192 days, the loss of GDP is of the order of R2.5 trillion – almost 50% of GDP. The lockdown strategy will clearly lead to an economic collapse of a magnitude that will impact health, lives, and livelihoods.[60]

The immediate human cost has been immense. The vast majority of South Africans among the working poor and the unemployed—and their children—have no income now because of the lockdown and no reserves to reach into to buy food. Those who work in casual employment or in the informal sector are now unemployed. South Africa already had a high unemployment rate at 29 percent in early 2020. Now even larger numbers are unable to provide for themselves and their families.

Prevalence of hunger under the lockdown has reached 'disturbing' levels, with nearly 30% of the country without food. According to a Business Day report, a survey by the Human Sciences Research Council (HSRC), conducted with the University of Johannesburg's Centre for Social Change, confirms what is visible on the streets, in the long queues for food parcels and from reports of food trucks and supermarkets being looted. The HSRC survey conducted from 13 to 18 April indicated a national average of hunger at 27.8%. While data from the second survey conducted from 18 to 27 April is still awaited, the indication was that there was an overall 5% increase in the national average of people experiencing hunger. The survey on the frequency of hunger asked respondents whether they had gone to bed feeling hungry. It found that the highest prevalence of hunger (44%) was in worker hostels and student residences, followed by those in informal settlements (43.3%) and then backyard shacks or rooms (39.5%). Of the respondents living in rural areas, 30.9% of those interviewed said they had gone to bed hungry.[61] The Treasury estimates that between 3-million and 7-million jobs will be lost due to the measures taken to combat the virus. Conservatively, 10% of South Africans will become poorer, and as a result, will lose a few months of their lives.[62]

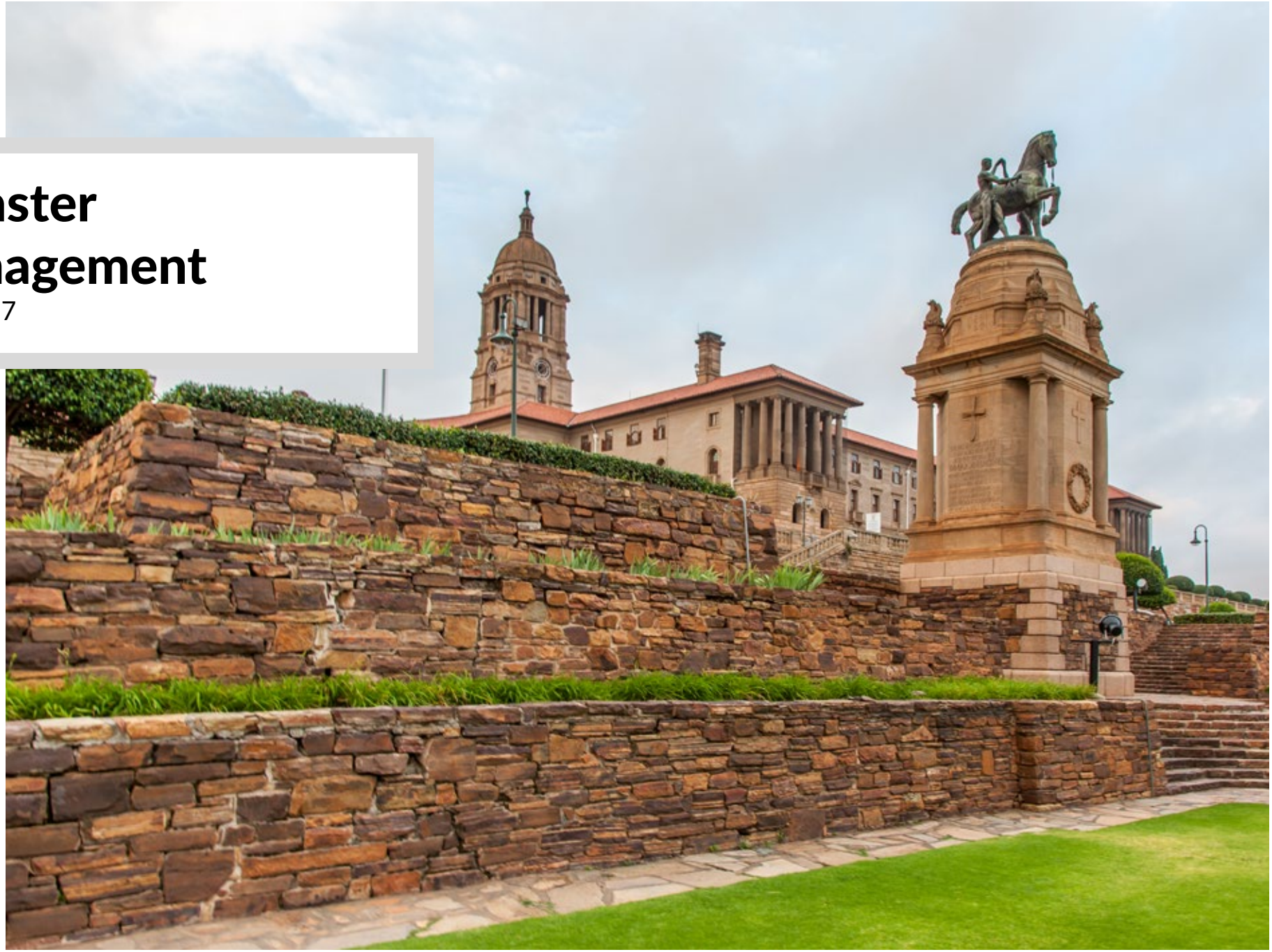
This situation has brought many South Africans before the stark choice of either starving to death or being infected by Covid-19 and possibly succumbing to this disease. In this regard the relief process itself has been politicized and corrupted by officials demanding proof of political loyalties before allowing food distribution. Finally, the centralized food distribution points represent a Covid-19 risk since they have poorly enforced social distancing. [63]

A model produced by four actuaries, an economist and a doctor checked by lawyers and mathematicians under the auspices of Panda (Pandemic data-analysis) and led by actuaries Hudson and Castleden shows that the Lockdown has the potential of causing 29 times more deaths than Covid-19 itself. The actuaries used a model comparing "years of lives lost" from Covid-19, to "years of lives lost" from the lockdown. Panda's analysis says: "the impact of the virus on the vast majority of the population, particularly the economically active and schoolchildren, has been massively overstated". Their model showed that the number of years lost owing to the economic contraction caused by lockdown lies between 14 million and 24 million.

[60] South Africa needs a post-lockdown strategy that emulates South Korea The Conversation accessible at https://theconversation.com/south-africa-needs-a-post-lockdown-strategy-that-emulates-south-korea-136678
[61] Business Live Almost 30% of SA stalked by hunger during lockdown, survey finds accessible at https://www.businesslive.co.za/bd/national/2020-05-06-almost-30-of-sa-stalked-by-hunger-during-lockdown-survey-finds/
[62] Businesslive Lockdown disaster dwarfs Covid-19, say SA actuaries accessible at https://www.businesslive.co.za/fm/features/2020-05-05-lockdown-disaster-dwarfs-Covid-19-say-sa-actuaries/
[63] Hunger begins to replace Covid-19 as existential fear in South Africa accessible at https://www.americamagazine.org/politics-society/2020/04/28/hunger-begins-replace-Covid-19-existential-fear-south-africa. Hunger numbers: Millions, millions, millions need food – Daily Maverick 8 May 2020 accessible at https://www.dailymaverick.co.za/article/2020-05-08-hunger-numbers-millions-millions-millions-need-food/?utm_medium=email&utm_campaign=First%20Thing%20TGIF%208%20May%202020%20Mi-Plan&utm_content=First%20Thing%20TGIF%208%20May%202020%20Mi-Plan+CID_29e724e7490e31391f9ce9ae123172ec&utm_source=TouchBasePro&utm_term=Hunger%20numbers%20Millions%20millions%20millions%20need%20food.
[64] Businesslive Lockdown disaster dwarfs Covid-19, say SA actuaries accessible at https://www.businesslive.co.za/fm/features/2020-05-05-lockdown-disaster-dwarfs-Covid-19-say-sa-actuaries/

Disaster management

Section 7



Reason for and object of Disaster Management Act 57 of 2002

South Africa was one of the first African countries to comprehensively legislate disaster (risk) management. The legislative and policy-making process started in June 1994, after severe flooding in the Western Cape province. This process culminated in the Disaster Management Act No. 57 of 2002 (DMA) and the National Disaster Management Policy Framework (NDMF) in 2005 (preceding the Hyogo Framework for Action). The Act and Framework facilitated a shift in traditional disaster response thinking, to disaster risk reduction, prevention and mitigation The aim of the DMA is: "to provide for an inte-grated and co-ordinated disaster management policy that focuses on preventing or reducing the risk of disasters, mitigating the severity of disasters, emergency preparedness, rapid and effective response to disasters and post-disaster recovery; the establishment of national, provincial and municipal disaster management centres; disaster management volunteers; and matters incidental thereto."[65] From the preceding statement it becomes clear that the legislator's intention was to provide for the management and mitigation of natural disasters subsequent to their occurrence. It is doubtful whether health risks can be brought under the concept of a disaster against the backdrop of the reason for the promulgation of the DMA. The reference to disease in section 1 is view of the DMA's genesis, disease originating from a disaster.

[65] Van Niekerk A critical analysis of the South African Disaster Management Act and Policy Framework in Disasters doi:10.1111/disa.12081 accessible at https://www.researchgate.net/publication/265388994_A_critical_analysis_of_the_South_African_Disaster_Management_Act_and_Policy_Framework.

Sufficient magnitude?

Assuming that the DMA may apply the question in view of the state of Covid-19 infection at the point where the declaration was made[66] and presently it can rightfully be asked whether the perceived disaster: "is of a magnitude that exceeds the ability of those affected by the disaster to cope with its effects using only their own resources.". In this regard the conclusion reached by Panda that: "Had the prospect that coronavirus could kill tens of millions of people been increasingly confirmed, lockdowns may have been justified. That possibility no longer exists. It now seems unlikely that more than a 1 million will die worldwide. The humanitarian crisis provoked by lockdown, however, is a matter of sheer certainty" aptly answers this question – more so if the level of the South African Covid-19 experience which is vastly different to that of the highly infected countries is considered. [67]

Viewed from the historical progression of the pandemic in our country, it has not at any stage grown to the proportion that it is of a sufficient magnitude to warrant the decla-ration of a disaster. Compared to other public health emergencies which include the current TB and HIV epidemics, Covid-10 pales into insignificance. Consider that with Covid-19 the average infections since 05 March 2020 is 145 per day.[68] TB has a daily count

[66] 49 Covid-19 infections on 15 March 2020.
[67] Businesslive Lockdown disaster dwarfs Covid-19, say SA actuaries accessible at https://www.businesslive.co.za/fm/features/2020-05-05-lockdown-disaster-dwarfs-Covid-19-say-sa-actuaries/
[68] At 06/05/2020

of 882. Further only 7% of the 7220 (currently 411) already confirmed Covid-19 cases will require medical attention.[69] The average daily cost of a hospital bed is R2 237 per day.[70] Currently the cost of Covid-19 hospitalisation is R1,1 million per day and treatment is for 14 days. The ICU cost is R27 000 per day. Up to now here have been 65[71] ICU Covid-19 patients who stay 14 days. The ICU costs up to now runs to R66 million, making the direct total health budget exposure to Covid-19 approximately R122 million. The Budget for the treatment of TB is R20,7 billion p.a.

Existing legislative provisions governing notifiable diseases

Section 90(1)(j) of The Health Act 61 of 2003 empowers the Minister of Health to frame regulations regarding notifiable diseases which is defined by s 1 of the Act as: "disease resulting from an infection due to pathogenic agents or toxins generated by the infection, following the direct or indirect transmission of the agents from the source to the host". Extensive regulations dealing with notifiable diseases were promulgated by the Minister of Health in Government Gazette 1434 of 15 December 2017. In terms of regulation 12(2) the Minister may declare a medical condition as notifiable if in his or her opinion the medical condition - (a) poses a public health risk to a population of a particular community, district, municipality, province or the country; (b) may be regarded as a public health risk or has a potential for regional or international spread; and (c) may require immediate, appropriate and specific action to be taken by the national department, one or more provincial departments or one or more municipalities. It provides an extensive framework for dealing with such a medical condition including in regulation 15 mandatory medical examination, prophylaxis, treatment, isolation and quarantine and the control of spread of notifiable medical conditions in regulation 16.

[69] At 02/05/2020 411 patients were according to the Minister of Health hospitalised and 65 in ICU. The ICU capacity is 3000 beds which means there is 2,2% utilisation of capacity with 7808 infections at 06/05/2020 and 56 days since first case reported. There are approximately 72 000 hospital beds in South Africa. Unfortunately, the Government has neglected public health and shortage of hospital beds and overcrowding of hospitals is a feature of the South African public health system. Medical Brief It's not just about the number of hospital beds... accessible at https://www.medicalbrief.co.za/archives/not-just-number-hospital-beds/.

[70] Comparing the Cost of Delivering Hospital Services across the Public and Private Sectors in South Africa at https://www.google.com/search?client=firefox-b-d&q=Daily+hospital+cost+south+africa

[71] At 6 May 2020.

State of public health

The ability of public health to deal with any major health phenomenon is severely hampered by the state of public health prior to the arrival of Covid-19. Of all patients in SA, 84% access healthcare in the public sector. This group is being denied access to general health care. In the main, they are SA's most vulnerable poor. They are the victims of failing leadership, incompetent management, poor governance, legislative constraints and strikes amongst workers in essential services. They are forced to bear the associated burdens of morbidity and mortality. Poor people are more vulnerable than others to a range of illnesses and may also experience poor healthcare because of a lack of access. This vulnerability is further heightened by institutional and functional failures that further impede access.[72] This is a fact that may have contributed to the reliance on the DMA in order for the government to avoid a potential disaster triggered by the Covid-19 pande-mic. At the best of times public health facilities are overcrowded not least if the number of Covid-19 infected patients projected by the government should materialise.[73]

[72] Dhai Healthcare in crisis: A shameful disrespect of our Constitution South African Journal of Bioethics Law 2018;11(1):8-10. DOI:10.7196/SAJBL.2018.v11i1.649 accessible at www.ajol.info › index.php › sajbl › article › download PDF; Also see ENCA SA healthcare system on verge of collapse: Health Ombudsman accessible at https://www.enca.com/south-africa/watch-sa-healthcare-system-on-verge-of-collapse-health-ombudsman

[73] First Take SAfm Overcrowding in SA hospitals a serious problem at https://iono.fm/e/804778.

Constitutional issues

The utilisation of the DMA has curtailed important basic human rights. In view of what was said above, the justification for this impingement is questionable. The following basic rights can be identified:

- Freedom of movement and assembly
- Restrictions on sale and movement of goods
- Censorship

Freedom of movement and assembly

The initial restrictions on movement pertained to entry into South Africa and the limitation of gatherings. Initially gatherings of no more than 100 individuals were permitted, but as of midnight 26 March, all gatherings including congregating for prayer is prohibited[74], except for funerals that are restricted to 50 people. Foreign nationals from high risk countries were prevented from entering South Africa from 18 March 2020. As of midnight, on 26 March, all but essential movement is prohibited. The leaving of a residence is only permitted to buy essential goods, seek medical attention, buy medical products, collect social grants, attend a funeral of no more than 50 people, or access public transport for essential services during specified times. Leaving a house for exercise or to walk a dog was at first not permitted but is now allowed between 06:00 and 09:00. Movement between provinces and districts is prohibited. In addition, there is a general

[74] Muhammed Bin Hassim Mohamed and others v the President of the Republic of South Africa and others, Case number 21402/20 was an urgent application to allow Muslim prayers. According to the applicants, the Lockdown Regulations violated not only their freedom of religion but also their freedom of association, freedom of movement, and their right to life and dignity, all principles enshrined in South Africa's bill of rights. Notwithstanding recognition by the court of the need to apply the proportionality assessment, the judgment is devoid of any proportionality assessment. Instead, the court focused on the question whether the limitations imposed by the Lockdown Regulations are reasonable and justified. The High Court concluded that the Lockdown Regulations were reasonable and justified. This illustrates clearly the overreach facilitated by the application of the DMA.

curfew from 20:00 to 05:00. Cumulatively, these measures go further than any restrictions on movement under the apartheid government.[75]

Any individual who is suspected of having COVID-19 or has been in contact with a person who has tested positive for COVID-19 cannot refuse to consent to be tested. If the test is confirmed positive, they cannot refuse to submit to treatment, isolation, or quarantine. Arguably, such measures are unnecessary as the Regulations Relating to the Surveillance and the Control of Notifiable Medical Conditions gazetted in June 2017 under the National Health Act 2003 already make provision for the mandatory examination, treatment, isolation and quarantine. Under the 2017 regulations, such an application must be made to the High Court by the Head of a provincial department. The COVID-19 regulations, however, go further as a person who refuses to consent to testing or isolation can be quarantined for 48 hours while a warrant is sought. Section 36(1) of the Constitution requires a limitation of rights to be proportionate. The powers granted under the 2017 regulations appear to be suitable for COVID 19 and it is unclear why an extension of the powers was deemed necessary. Considering there have been no reported cases or indication that people will refuse testing, it is questionable whether this extension of powers is indeed a proportionate response. [76]

[75] Labuschaigne, Melodie; Staunton, Ciara: COVID-19: State of Disaster in South Africa, VerfBlog, 2020/4/11, https://verfassungsblog.de/Covid-19-state-of-disaster-in-south-africa/. Verbatim and edited version.
[76] Idem.

Restrictions on sale and movement of goods

As of midnight 26 March 2020, only essential goods may be sold. This includes any food and animal food products; cleaning and hygiene products; medical and hospital supplies; fuel, coal and gas, and basic goods, including airtime and electricity. The selling of alcohol and cigarettes are expressly prohibited. Price controls on certain goods have also been introduced, including toilet paper, hand sanitiser and some food products. Failure to comply can result in a fine, imprisonment of up to 6 months, or both.

Censorship

The South African Constitution guarantees freedom of expression and this includes “freedom of the press and other media” and “freedom to receive or impart information or ideas”, which are alterable rights. The Covid-19 regulations criminalise the intentional misrepresentation or publishing of a statement that a person or persons has/have Covid-19. The regulations also criminalise the publishing of a statement (including via social media) that intends to deceive another person about any measure taken by the government to address Covid-19. The focus is on disinformation and is aimed at preventing the spread of false cures that have been seen in the context of HIV. However, concerns have been expressed by the Committee to Protect Journalists that this may prompt other jurisdictions to adopt more oppressive press censorship. The risk of censorship that does not observe standards of necessity and proportionality in this time is that it may have the opposite effect and limit access to valuable and reliable information for public health. There is evidence within South Africa that this has already occurred as the Ministry of Health has stated that the dissemination of information is centralised to government, information requests by the press should be directed to the NICD and has it instructed other experts in South Africa not to talk to the press. Considering the NICD is currently

overwhelmed, this has led to concerns that access to information has already been limited. [77]

Regulations

There is growing unease at the use of the DMA to limit freedom of movement and ban the sale of alcohol and tobacco products and the regulations in general. For the Covid-19 DMA regulations to be constitutionally justifiable all regulations must at the very least be rationally related to the stated aims of the declaration of a national disaster. The use of the DMA to impose universal regulations effective countrywide where parts of the country did not have any Covid-19 infections has been questioned. Disaster management is not a State of Emergency, and therefore cannot abrogate basic rights. This raises questions as to the constitutionality of the measures taken – more so, where there is existing legislation dedicated to the regulation of notifiable diseases. [78]

[77] Idem.

[78] Business Day Tobacco, Alcohol bans wilt under scrutiny accessible at https://tisobg.pressreader.com/@legalbrief@legalbrief.co.za/csb_pUkyqwa7oYV-PyTq2JocjielajRn1k5KHQGgecrj35bjrHovjO49bHSPUI4fkozf

Way forward

Section 8

Way forward

Lockdown does not present a lasting solution – the virus as many other viruses has come to be with us for the duration. Lockdown is merely a tool to manage and mitigate the spread of the Covid-19 pandemic. Government has chosen the path followed by many other governments faced with the Covid-19 pandemic. Whether this strategy is best suited to our circumstances, time only will tell. In hindsight it could be said that there was no timely and sufficient contingency planning.

It has been suggested that the way forward is by taking a leaf out of South Korea's book. South Africa cannot afford to embark on a strategy of extended periodic lockdowns. It is critical that the capacity for mass testing and contact tracing is in place prior to the end of the current lockdown. The country's health system must be given every support to ensure its success. It is estimated that if South Africa were to rely exclusively on lockdowns to during 2020 keep the pandemic under control, approximately 192 days of lockdown would be required, divided into three episodes. This is because the epidemic is likely to resurge the moment any lockdown is removed unless there are strong public health interventions in place. These interventions include testing at scale, isolation of infectious cases, and high levels of tracing and quarantine of their close contacts. Seeing that the projected cost of a lockdown is Approximately R13 billion per day, the use of lockdowns is because of this and its devastating effect on the poor and disadvantaged simply not viable. In fact, the devastating consequences of lockdown on the poor is sufficient to immediately lift the lockdown as is being done in Pakistan despite 25000 cases and ever rising number of infections in that country, its Prime Minister saying that: "The decision is being taken because the country's large number of poor people and labourers cannot not afford to live under lockdown any more".[79] Post lockdown as was done in South Korea a rigorous test, track and trace regime is required in conjunction with continued social distancing; strict implementation of health protocols for employers; ongoing self-isolation of high risk groups; and measures to mitigate the risk of viral spread in the country's mass transport systems. Also, incredibly careful systems and support to manage risk and spread within health care facilities. The cost of this strategy would be a fraction of the cost of repeated lockdowns.[80]

[72] Dhai Healthcare in crisis: A shameful disrespect of our Constitution South African Journal of Bioethics Law 2018;11(1):8-10. DOI:10.7196/SAJBL.2018.v11i1.649 accessible at www.ajol.info › index.php › sajbl › article › download PDF; Also see ENCA SA healthcare system on verge of collapse: Health Ombudsman accessible at https://www.enca.com/south-africa/watch-sa-healthcare-system-on-verge-of-collapse-health-ombudsman

[73] First Take SAfm Overcrowding in SA hospitals a serious problem at https://iono.fm/e/804778.

[79] Pakistan to lift lockdown from Saturday, despite rising coronavirus curve Read more at: https://economictimes.indiatimes.com/news/international/world-news/pakistan-to-lift-lockdown-from-saturday-despite-rising-Covid-19-curve/articleshow/75599946.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

[80] Van den Heever et al The Conversation South Africa needs a post-lockdown strategy that emulates South Korea accessible at https://theconversation.com/south-africa-needs-a-post-lockdown-strategy-that-emulates-south-korea-136678.

Conclusion

Section 9

Conclusion

LIn this survey of the Covid-19 pandemic the following questions arise:

- Considering the origin of the pandemic and its South African development up to date, is the Covid-19 pandemic as big a threat to life and limb as would appear from media and government statements?
- Does the pandemic judged on the evidence currently available constitute a disaster or is the shutting down of the economy and its consequences on the poor a consequential disaster of much greater magnitude?
- Does the pandemic justify the shutting down of economies – especially consider-ing the consequences of lockdown on the global poor?
- In view of the unique development of the pandemic in South Africa and South Africa's economic position, is the government's assumptions and strategy the best possible way of dealing with the pandemic?
- Was the government's action of invoking the DMA and applying the same measures countrywide when portions of the country was not subjected to the pandemic legally justifiable?
- What is the best way forward to mitigate a precarious situation brought about be circumstances and decisions previously made?

You be the judge!

Prof. Hennie Klopper
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