SPECIAL COVID-19 EDITION

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INTRODUCTION

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'Too little, too late' – COVID-19 op-ed by Profs Wim de Villiers and Eugene Cloete

President Ramaphosa's latest announcement on the lockdown is too little, too late

While the vast majority of South Africans who contract COVID-19 will survive, the ongoing lockdown is destroying the livelihoods of millions of people. It is not being lifted fast enough, and we are still not getting sufficient data to determine the real risk of the pandemic.

Lockdown regulations were imposed by governments worldwide to slow the spread of COVID-19. They worked initially, but it has become patently clear that strict lockdown regulations are wreaking economic havoc.

Prof Shabir Madhi, an infectious disease expert who serves on South Africa's Ministerial Advisory Committee on Health, said in a Daily Maverick webinar on Sunday 10 May that “the main reason why the lockdown was important was that health facilities were not ready. It bought them time to prepare bed capacity, oxygen points, personal protective equipment and so on".

However, “continuing the lockdown will not stop the wave of community transmissions from hitting South Africa, and continuing it will prolong the collateral damage that it is causing".

In a contribution to The Lancet Global Health, Prof Wolfgang Preiser, head of the Division of Medical Virology at Stellenbosch University's (SU) Faculty of Medicine and Health Sciences, joins others in warning of the “deprivation and hunger that will result from prolonged economic disruption".

We have clearly reached the stage where the threat to livelihoods because of job losses and increased poverty is far greater than the threat to lives because of COVID-19. The announcements by President Cyril Ramaphosa last night, 13 May, did not go far enough.

Dr Nick Spaull of SU's Economics Department, describes the coronavirus pandemic as the “largest shock of our generation" – one that is “having profound social and economic impacts on our country". He is the principal investigator of a large new study to track the economic impacts of COVID-19 in South Africa – a collaboration between SU and the Universities of Cape Town and the Witwatersrand.

His colleague, Dr Nwabisa Makaluza, a member of SU's Research on Socioeconomic Policy Group, argues that the most important question at the moment is how COVID-19 is affecting the lives of the most marginalised people in South Africa.

In addition to the growing economic and humanitarian crisis caused by the stringent lockdown restrictions, there is also the disruptive effect of the current situation on access to essential health services. This includes access to childhood immunisation for the prevention of serious diseases, like measles, and the diagnosis and treatment of conditions, such as HIV, TB, and diabetes. This may ultimately result in more suffering and death than that caused by COVID-19.

What are opinions further afield? Dr Johan Giesecke, a Swedish physician and Prof Emeritus at the Karolinska Institute in Stockholm, writes in The Lancet Global Health, “There is very little we can do to prevent this spread: a lockdown might delay severe cases for a while, but once restrictions are eased, cases will reappear."

In a recent interview, Sweden's state epidemiologist, Dr Anders Tegnell, defended his nation's approach of not imposing a blanket lockdown but instead focusing on high-risk areas, such as the elderly and nursing homes, coupled with guidelines for voluntary social distancing and emphasis on handwashing in the general population. They relied on the population's cooperation – and got it, because public trust levels are high in Sweden.

Dr John Lee, a recently retired prof of pathology and a former consultant pathologist for the National Health Service in the United Kingdom, agrees that Sweden's model seems equally effective, but with much lower cost. Knowing that COVID-19 affects children the least, they kept schools open. And they kept the economy going.

Lockdown is not sustainable, Dr Lee writes in The Spectator: “No country has ever improved the health of its population by making itself poorer."

He points out that the lockdown directly harms those who will be largely unaffected by coronavirus: “The vast majority of people under 65, and almost everyone under 50, will be no more inconvenienced by this disease than by a cold."

Scientific data shows that age plays a significant role in COVID-19. The older you are, the higher the risk of mortality, especially if you have an underlying disease. Among people known to be infected with coronavirus, the risk of death if you are over the age of 80 is 14.8%, but for those under the age of 60 it drops to 1.3%, and it decreases to less than 0.4% if you are under the age of 50.

Let us put that into context. The average age of South Africans is 27 years, with 10 million people under the age of 10 (risk nearly zero), 40 million people under the age of 40 (death risk 0.2%) and about two million people over 70 years. Around 90% of deaths in South Africa due to COVID-19 have been of people older than 70 years.

Given this, the vast majority of the population in South Africa that contract the disease will survive, and by far most will be completely asymptomatic or only ever have mild symptoms.

Currently we only receive a small amount of descriptive data about those affected by COVID-19. This means that we get the total number of new infections on a daily basis and the total number of deaths. This falls far short of what is needed to determine the real risk of the pandemic.

Giving a daily cumulative number of confirmed infections is of no use, unless the total number of tests for a particular day is also provided, so that the percentage of positive tests can be calculated.

Because more tests are done in the Western Cape than elsewhere, means that there will be more positive tests. This does not make the province the epicentre of the disease, it merely reflects more efficiency in tracking the disease.

Epidemiology is much more than just descriptive. What is missing at the moment is analytical epidemiology, which evaluates risk factors for disease outcomes and explores causal relationships. Factors other than age all play a role in determining risk, including health

status as well as socioeconomic and environmental factors.

Based on official South African statistics, the overall case fatality rate among those who test positive for COVID-19 is 1.9%. Those who are tested for coronavirus likely represent people with severe symptoms and poorer outcomes. The true population-based mortality rate, which includes all infected people regardless of the presence or severity of their symptoms, can be expected to be much lower. We therefore need more information to understand this risk better.

Tim Harford, an economist and journalist, writes in The Financial Times that systematic serological surveys are vital to determine the true spread or prevalence of the disease in the community.

“Serological tests look for the antibodies that suggest a person has already been infected. These antibody tests should give more clarity, but the early results remain a statistical patchwork for now."

The average mortality in South Africa due to COVID-19 is currently three per day, a total of 206 since 5 March [at the time of writing this on 12 May]. If we compared that to some other causes of death, we see that 194 of the 7.7 million people living with HIV-AIDS in our country die daily, 80 daily as a result of TB, 69 as a result of diabetes, and 26 as a result of influenza.

While we are grappling with insufficient epidemiological information about the real risk that the novel coronavirus poses, one of the only certainties at the moment is that the pandemic is destroying the livelihoods of millions of people.

That is why President Ramaphosa's announcements last night were too little, too late. Dragging the lockdown out any further is not a good idea.

Informed decisions need to be made on when and how the economy and the education sector are opened up again. We cannot continue to make decisions – some of which seem irrational – on the information that is currently being presented and used.

PROF WIM DE VILLIERS, A GASTROENTEROLOGIST, IS RECTOR AND VICE-CHANCELLOR OF STELLENBOSCH UNIVERSITY. PROF EUGENE CLOETE, A MICROBIOLOGIST, IS VICE-RECTOR FOR RESEARCH, INNOVATION AND POSTGRADUATE STUDIES, AND HEAD OF SU'S COVID-19 MEDICAL ADVISORY COMMITTEE.

SOURCE: HTTPS://WWW.SUN.AC.ZA/ENGLISH/LISTS/NEWS/DISPFORM.ASPX?ID=7351

HEALTHCARE

In This Section

COVID-19: Nurses deliver care with compassion, grit and courage

Nurses and midwives play a vital role in providing healthcare services, and constitute more than 50% of the healthcare workforce in many countries. They are often the frontline healthcare professionals, and first point of care in their communities who devote their lives to caring for patients throughout the continuum of life. Nurses and midwives are teachers, advocates, caregivers, advisors, critical thinkers, problem solvers, innovators, and researchers.

In addition, nursing is an art and a science, underpinned by a strong foundation of care and compassion. Nurses are often the ones who are at the patients' bedside 24/7, transforming lives, and who deliver care from the birthing process, to either recovery or peaceful death of a patient. Nurses and midwives remain the core of the healthcare system and healthcare workforce; they are essential in maintaining continuous patient care and establishing a seamless working relationship across the multi-and interdisciplinary teams, with the aim of delivering integrated care.

Nurses and midwives can transform the ways health actions are organized, decisions, policies and research are implemented and how health care is delivered. They are referred to as the backbone of primary healthcare systems and healthcare establishments and are essential to achieve Universal Health Coverage (UHC). However, as indicated by the World Health Organisation (WHO), globally nine million more nurses and midwives are needed if UHC is to be achieved by 2030.

The WHO designated 2020 as the “International Year of the Nurse and Midwife" to mark the bicentenary of the birth of the founder of modern nursing, Florence Nightingale and to recognise the critical contribution nursing makes to global health. Furthermore, it is a call for nations of the world to unite in celebration of the contributions that the nursing and midwifery profession make to health and the global population. This year is significant for the WHO in the context of nursing and midwifery strengthening for UHC, a time to celebrate the work of nurses and midwives internationally and highlighting the challenging conditions nurses often face in advocating for the profession (WHO, 2020). Thus, it is fitting that this is also the focus of World Health Day (7 April) celebrations for 2020.

In lieu of the WHO's announcement, many nursing schools and organisations globally started celebrating the profession. However, the nursing world has quickly shifted attention from the WHO's proclamation of the “International Year of the Nurse and Midwife" to the COVID-19 pandemic.

In December 2019, a newly identified coronavirus, known as COVID-19, emerged in Wuhan, China causing illness in humans. Multiple clusters of COVID-19 have since been reported across the globe, including the African continent. The United States Department of Health and Human Services declared the virus to be a nationwide health emergency following the WHO's declaration of a public health emergency of international concern on January 30, 2020. Currently, South Africa is experiencing a lockdown in an attempt to “flatten the curve" and reduce the spread of the virus. On January 21, 2020, China announced for the first time that healthcare workers have been infected, and the count has ever since increased in various countries across the globe.

Every day the media highlights the conditions that nurses and other healthcare providers are facing and how staff shortages and limited resources may impact the healthcare system's ability to save lives. Each nurse working with these patients is potentially putting their own health at risk, and many nurses, as reported in so many countries, are contracting the virus despite their best efforts to keep themselves safe. Access to personal protective equipment is limited in many healthcare establishments, testing remains inadequate, and the likelihood of shortages ranging from masks, ventilators and hospital beds has left many healthcare workers, including nurses, with moral distress, burnout, emotional distress and feeling isolated and helpless.

However, it is during this period of the pandemic that nurses in all healthcare establishments has shown absolute resilience, care, passion, dedication and commitment. The nurse's pledge for service to humanity has become in so many instances the order of the day. Practising the noble tradition of the nursing profession, with conscience, dignity, and respect, and having the total health of patient entrusted to their care became the first consideration and intensified for so many nurses during this vulnerable and uncertain time in our healthcare landscape.

During this pandemic, nurses continue to deliver care with compassion, amidst their own fears and ability to deal with the implications of COVID-19. In the time of social distancing, nurses are still providing the human connection patients need to help them heal, as they navigate illness and the pandemic. The lessons of Florence Nightingale nursing practiced during the Crimean War are still being applied today, even more so during the COVID-19 pandemic, namely basic hand washing and hand hygiene practices, maintaining standards of cleanliness, recording, interpreting and learning from data and health trends to name but a few. In 1870, Florence stated that it will take 150 years for

the world to see the kind of nursing that was envisioned. Perhaps, with the convergence of these two events, it is a time to highlight the role of the nurse and the nursing profession that is so critical and needed.

I believe that as we navigate our way through the COVID-19 pandemic, the WHO mandate to declare 2020 as the "International Year of Nurse" has become more profound. Nurses across the globe should indeed be honoured, appreciated and gratitude be shown for the work they do. Their compassion, grit, courage, noble qualities, and deep sense of commitment to render care to those entrusted to their care and to rise above their own circumstances, vulnerabilities, fear and uncertainties should be acknowledge and celebrated throughout and beyond the proclamation of the WHO. Nurses are ultimately a vital link in the healthcare profession, and in providing healthcare delivery.

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HTTP://WWW0.SUN.AC.ZA/VIVUS/VIVUS-APRIL-2020/GENERAL/COVID-19-NURSES-DELIVER-CARE-WITH-COMPASSION-GRIT-AND-COURAGE.HTML

Healthcare inequality

Freedom Day, commemorated annually on April 27, reminds us of our first multiracial elections on this day in 1994, which gave birth to our constitutional democracy. Our Constitution, with its Bill of Rights, finally enacted in 1996, reflects something of the spirit of our people's struggle that buried apartheid in the country.

While reflecting on Freedom Day in the midst of the grip which the Covid-19 coronavirus has on the world, it struck me anew that healthcare is singled out in the Constitution because the liberation movement(s) recognised its utmost importance.
In the Bill of Rights, it says: "(1) Everyone has the right to have access to (a) healthcare services, including reproductive healthcare; (b) sufficient food and water; and (c) social security, including, if they are unable to support themselves and their dependants, appropriate social assistance. (2) The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights. (3) No one may be refused emergency medical treatment."

What struck me again about our country's human rights approach to healthcare, is the way in which it recognises the importance of the economic and social conditions that influence individual and group differences and status of health.

But, before we continue, a quick story of what happened to a friend of ours recently. On the day our lockdown started, she was operated on for colon cancer. The diagnosis had been made earlier that week, and she needed this operation urgently. She and her husband don't have medical aid but prefer private medical healthcare. To be admitted, they had to make a huge financial deposit. Because her husband's money is currently in a fixed investment, he had to borrow the money from a friend. Gladly, everything went well, she received excellent service and after nine days she was discharged, but with a total cost of almost R400 000.

While I was wondering about this, I recalled conversations I had with the late ANC politician and minister, Dullah Omar, during the early 1990s. On more than one occasion, he emphasised that healthcare would continue to be a challenge in our country, and then always remarked: good healthcare is not a privilege, but a basic human right.

Healthcare in South Africa treats people with money extremely well, because skills and professionals follow money, while so many poor people have to depend on second-rate healthcare. According to the department of health, "80% of the specialists of the country are in the private sector, serving only 16% of the population. The remaining 84% of the population is served by only 20% of specialists."

Based on information by the South African Health Review (2008 – the latest I could find), the department further points to the following unequal spread of other health professionals: "only three out of every 10 doctors on the professional register work in public hospitals and clinics; only one out of every 10 registered dentists works in a public hospital or clinic; four out of every 10 registered professional nurses work in public health facilities and half of the enrolled nurses are employed in the public health sector; only one of every 10 registered pharmacists works in a public hospital or clinic; fewer than two out of 10 registered physiotherapists work in public facilities; about one out of 20 registered psychologists … and one out of every 12 optometrists work in the public sector".

The department further states that there are approximately "1.2 million women who fall pregnant every year. The private health sector takes care of only 140 000 of them with 80% of the specialist doctors. The public health system takes care of a whopping 1 060 000 with only 20% of the specialists."

According to the journal, "one particular private hospital in Johannesburg [name withheld] has 30 specialist

gynaecologists. Limpopo has only seven full-time South African gynaecologists to serve a total of 40 hospitals in the whole public sector, Mpumalanga has six to serve a total of 33 hospitals and North West has seven to serve a total of 22 hospitals."

In a just world, the sickest people, not the richest, should receive the largest share of healthcare, in all respects. However, it is not only this inequality that is worrisome; there are also other factors leading to the current crisis in our healthcare system.

Mark Heywood, erstwhile executive director of human rights organisation Section27, in his 2019 article Ailing Nation – The things Sona won't say about the health crisis, refers in this regard to the "quantum of corruption in the health sector ... numbers of publicly trained doctors and nurses who drain out of the public health sector, into the private sector, to

Canada and Australia ... unacceptable levels of medicine stockouts, or equipment shortages", among other issues.

For Heywood, "health is vital to our national wellbeing". He then makes the important point that disparities in healthcare are not only "a symptom of the inequality we inherited from our past, [they are] also a cause of inequality in our future".

In light of this, a well-managed, capacitated and strictly administered National Health Insurance, as being constructed and envisioned by government, has become essential for the country in order to address these disparities, and as a way to provide access to high quality healthcare for everyone.

If we are willing to share our resources as a nation when it comes to matters of life and death, health and sickness, we will join hands in ways that really count, leading to more equality and freedom, and a system of social justice.

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https://www.sun.ac.za/english/Documents/newsclips/Jones_CityPress_Apr2020.png

More data needed on COVID-19 infections among healthcare workers

On 3 June, the International Council of Nurses (ICN) **implored** governments to compile data on healthcare worker (HCW) COVID-19 infections and deaths. As yet there is no global registry to track the pandemic's impact on HCWs, although it has infected an estimated 230,000 and led to the deaths of 600 nurses. Analysis by the ICN suggests that on average, 7% of all COVID-19 cases worldwide occur among HCWs. Notable exceptions include some high-income countries (USA, Spain and Ireland) where HCWs account for 15-30% of all infections.

There is a clear need to collect standardised epidemiological data on HCW infections to identify risk factors for COVID-19 infections and deaths, with few published studies to date. A **single hospital study** of 9000 HCWs in Wuhan identified a 1% staff infection rate, mainly affecting female nurses under 45 years of age with mild disease. The risk of infection was highest in COVID-19 low-risk areas of the hospital, suggesting a lack of awareness among these HCW. Staff infection rates declined rapidly as the outbreak progressed, possibly owing to enhanced HCW training, preparedness and compliance with infection prevention measures. In a **study** from two Dutch hospitals early in the pandemic, less than 1% of 9705 HCWs became infected. The infected staff worked in 52 different hospital departments, suggesting infection acquisition in the community rather than as part of a hospital outbreak.

South African HCWs have not been spared, with **511 HCW infections accounting for 7% of cases nationally** by 6 May 2020.(4) As the outbreak gathers pace, our HCWs will be increasingly exposed to COVID-19 in the workplace, on public transport and in communities. Many will fall ill, although a large proportion will remain **asymptomatic**, and at risk of unknowingly transmitting infection to others (rates of asymptomatic disease range from 10-80%). In common with the country's population, many HCWs are at risk for severe COVID-19 disease due to underlying conditions such as hypertension, diabetes, HIV or obesity.

As COVID-19 infections accelerate, HCW absences due to illness and death will exacerbate pre-existing staff shortages. Even among HCWs who remain healthy, COVID-19 will contribute to chronic fatigue,

psychological distress, and potential burnout. These negative direct and indirect effects of COVID-19 are already being experienced in many Cape Town hospitals, with staff fearing for their own safety and that of their patients, colleagues, and family members. Numbers of HCW infections and deaths have risen in tandem with increasing community infection rates, prompting labour unions to demand an investigation of HCW safety in public hospitals.

In the Cape Metro's largest facility (Tygerberg Hospital), approximately 6% of staff were diagnosed with COVID-19 infection between 1 April and 31 May (296/4672 staff members). It is not possible to establish definitively whether these infections were acquired in the community, on public transport or in the workplace. Similar to the Dutch COVID-19 HCW infection study, HCW infections at Tygerberg Hospital have occurred in over 50 different areas and wards, suggesting that a substantial proportion may be community-acquired rather than healthcare-associated. Indeed, three-quarters of staff diagnosed with COVID-19 infection work in non-clinical areas and COVID low-risk wards (where contact with COVID-infected patients would be absent or minimal), strengthening the likelihood that these infections were not acquired through clinical or patient contact.

It is unclear why the Western Cape and South African HCW COVID-19 infection rates are much higher than that reported from the Wuhan and Dutch hospitals. However, local HCW infection rates are in keeping with the global estimates suggested by ICN and could reflect high COVID-19 exposure in the community, as well as a need to further strengthen infection prevention practices in communities and healthcare settings.

Given the delayed COVID-19 introduction to South Africa and the flattening of the outbreak curve achieved by the national lockdown, our healthcare facilities fortunately had more time to prepare than many countries. At Tygerberg Hospital, a co-ordinated infection prevention and occupational health plan was enacted to mitigate the risk of COVID-19 infection transmission to staff and patients. Multiple measures were implemented to support staff and patient safety including:

- a COVID-19 risk assessment per department with identification of high-risk staff who required medical shielding by re-deployment to low-risk areas;
- COVID-19 prevention training for all categories of staff as well as daily COVID-19 educational and support messages for staff;
- daily COVID-19 symptom screening of all staff, patients and paediatric inpatient's caregivers visitor restrictions;
- a universal masking policy for staff and patients and provision of hand sanitiser at all entrances and clinical areas;
- enhanced surface and equipment cleaning and disinfection, and evaluation of symptomatic staff with priority SARS-CoV-2 testing;
- a secure supply chain for personal protective equipment (PPE) including prudent use and onsite ultraviolet decontamination of N95 respirators;
- building of showers for staff to use after shifts and installation of extraction fans and air-handling units in ICU areas.

Notwithstanding these many active measures to enhance staff and patient safety during the COVID-19 pandemic, there remain several challenges at Tygerberg Hospital and other healthcare facilities in our country. These include ageing hospital structures with minimal provision for patient isolation, inadequate bed spacing, lack of dedicated space for donning and removal of PPE and low staff to patient ratios, particularly for nurses and cleaners. Despite the many challenges and the fraught working conditions, South Africa's HCWs consistently demonstrate their optimism, tenacity, and willingness to adapt to and overcome obstacles. It is this resilience that gives HCWs, including those at Tygerberg Hospital, faith to hope for the best while at the same time preparing for the worst that COVID-19 may bring.

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http://www.sun.ac.za/english/Lists/news/DispForm.aspx?ID=7451

Cape Town's community health workers saving lives during COVID-19 pandemic

Cape Town's community health workers are helping to save lives during the COVID-19 pandemic by delivering medication to the houses of people in high-risk groups, writes Prof Bob Mash (Family Medicine and Primary Care) and his co-authors in an article for *Health24* (6 July).

Public sector primary care facilities in Cape Town care for a large number of people with chronic conditions such as HIV/Aids, tuberculosis, diabetes, hypertension, asthma and chronic bronchitis and emphysema. Many of these patients are over the age of 55, which put them at an increased risk of more severe COVID-19 infection.

It is, therefore, laudable that community health workers (CHWs), in partnership with the Western Cape Metropolitan Health Services and non-profit organisations, delivered 184,000 parcels of medication to peoples' homes in Cape Town during May 2020. Something that had never been done before. People with the aforementioned chronic conditions had their medication hand delivered by their local community health worker to their home. Given that we could still see a rise in infections in the Western Cape, these life-saving actions of CHWs are very important.

During the COVID-19 epidemic, the home delivery of medication has meant that people who are more at risk of severe COVID-19 have not exposed themselves to infection on public transport or at health facilities in order to obtain their medication. This has undoubtedly saved lives and enabled facilities to reduce numbers and maintain social distancing. In addition, by delivering medication at home, facilities have had more capacity to prepare for the surge of patients with COVID-19.

Prior to the onset of COVID-19, the Metro Health Services had invested in teams of community health workers across the city as part of a move towards more community-orientated primary care. Teams are employed through local non-profit organisations, linked to primary care facilities and responsible for defined groups of households. Under normal circumstances community health workers would visit their households and identify people with health risks who need assistance. These include, for example, people with symptoms of TB, people on treatment for chronic diseases, people that are pregnant or need family planning or immunisations.

Having this system already in place enabled a rapid re-organisation of CHWs to deliver medication and also to assist with community screening and testing for COVID-19. Most of the components needed to deliver medication at home were already in place and just needed to be brought together. The Metro Health Services already had a system for pre-packaging medication and delivering to health facilities for those with stable chronic diseases. The one missing piece of the puzzle was how to get the medication parcels from the facility's pharmacy to the non-profit organisation. This was solved in a variety of innovative ways using Uber drivers, bicycles, and scooters from local entrepreneurs, as well as drivers employed by the Western Cape Department of Health or non-profit organisations.

One of the major difficulties with the system was that people had not registered their correct address or telephone number with the department of health. It was very difficult to reach people to confirm their address. Out of the 184,000 parcels delivered, 16,600 were returned. In order to solve this problem, the department has created a WhatsApp automated messaging system where people can send in their correct details. If you want to access this system, then send the message “Hi" to 0872406325. You will need your appointment card details, address and contact number.

Other benefits of the home delivery system include the ability to screen households for symptoms of COVID-19 (recent onset of sore throat, cough, fever, or shortness of breath) when making the delivery. By definition, these households contain individuals who are more at risk of severe disease. In those with mild COVID-19 symptoms, the department of health is currently only testing people who are over the age of 55 years or with co-morbidities such as these chronic conditions. The same system can be used to deliver non-pharmaceutical materials or nutritional supplements.

We hope that this service will also improve collaboration between facility-based and community-based services. In addition, the stature and acceptability of CHWs within communities should be enhanced by performing such a valuable task.

Patient responses have so far been very positive, and this innovation is possibly something that will stay with us beyond the epidemic.

PROF BOB MASH HEADS THE DIVISION OF FAMILY MEDICINE AND PRIMARY CARE AT STELLENBOSCH UNIVERSITY. DR ZAMEER BREY IS AN EMPLOYEE AT THE BILL AND MELINDA GATES FOUNDATION AND CHARLYN GOLIATH AND DARRIN ROMAN WORK AT THE WESTERN CAPE METROPOLITAN HEALTH SERVICES. THIS IS AN ABRIDGED VERSION OF AN ARTICLE PUBLISHED IN THE AFRICAN JOURNAL OF PRIMARY HEALTH CARE & FAMILY MEDICINE RECENTLY.

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http://www0.sun.ac.za/vivus/vivus-2-aug-2020/engagement/cape-town-and-rsquos-community-health-workers-saving-lives-during-covid-19-pandemic.html

Vital to protect newborns and their mothers against COVID-19

Since newborn babies, as well as their mothers and the hospital staff looking after them, are very vulnerable to COVID-19, we need policies and systems that can help to protect them, write Profs Angela

Multiple challenges exist in preventing infection of one of our most vulnerable population groups, but Tygerberg Hospital is rising to the challenge with the implementation of policies and systems that not only mitigate the spread of coronavirus, but also address broader infection control.

While caring for patients during COVID-19 has focused mainly on adults, this is also a worrying time for a very vulnerable section of our population – our newborn babies, as well as their mothers and the hospital staff looking after them in neonatal and obstetric wards across South Africa.

Neonates (babies who are under 28 days old) and especially preterm babies (less than 37 weeks gestational age) and those who weigh below 2.5 kilograms, are particularly vulnerable as their underdeveloped immune systems struggle to fight infections. Hospitalised newborns are at even higher risk of infections, including COVID-19, as they often have to spend considerable time in hospital for feeding and growing, where they are exposed to multiple caregivers. Most of our public sector hospitals don't have isolation facilities. This increases the risk of spreading the virus among babies, mothers and hospital staff.

One of the difficulties in shielding hospitalised babies from COVID-19 is that many adults have asymptomatic infections or may transmit the virus before their first symptoms develop. Young mothers could also unknowingly be spreading the virus, as up to 45% of all adult COVID-19 infections are asymptomatic. In one USA study, one in seven pregnant mothers tested positive for COVID-19 – 88% of them asymptomatic – during the height of the New York pandemic.

We are still learning a lot about transmission and disease patterns of COVID-19 from small case series and reports. With the currently available information, the coronavirus can be transmitted to neonates in three ways. Mothers can transmit the virus to babies after birth. This is likely to be the main way of spreading the virus to newborns, via droplets from the mother's mouth and nose and by direct and indirect contact with contaminated surfaces and objects. The second path of transmission is by other adults that come in contact with the baby after birth. This could occur in the community or in hospital when babies get exposed to COVID-infected people or contaminated surfaces and objects. The third route is when the virus is spread across the placenta to the foetus. This is very rare and difficult to prove, with very few reported cases globally so far.

While reported cases of babies testing positive for COVID-19 have been low worldwide, COVID-19 is still a risk for neonates, and we cannot afford to drop our guard in any way.

At Tygerberg Hospital in Cape Town, we are doing all we can to protect our babies, mothers, and staff. In theory, if medical staff wear appropriate Personal Protective Equipment (PPE) no high-risk exposures to COVID-19 should occur. But despite our best Infection Prevention and Control (IPC) measures, medical staff still become ill, as they can contract the virus anywhere, from home and in the hospital to public transport. Staff then have to go home and isolate until their test results are reported and take further time to recover if their test results are positive.

Absenteeism is also hitting hard, as staff are under immense physical and mental pressure during the pandemic, with many fearing for their own as well as their family's safety. This makes it extremely difficult to perform normal newborn care in very busy units that are routinely overcrowded and understaffed. It can also be very upsetting for mothers who become ill and test positive for the coronavirus. If their babies are premature or very ill, mothers cannot enter the neonatal ward and have to self-isolate at home or in quarantine or isolation facilities until they are no longer infectious.

But there are important steps we have been able to take to mitigate the spread of COVID-19 in our neonatal wards and among our healthcare workers. One of these strategies is to screen all visiting mothers for symptoms daily and to insist they wear face masks. If testing is widely available, hospitals should consider testing pregnant women when they are admitted to hospital, while symptomatic mothers and staff should have urgent access to quick COVID-19 testing. We also need to ensure that we don't unnecessarily admit babies to hospital and don't keep babies in hospital for longer than needed, so that we decrease their risk of exposure to COVID-19.

The COVID-19 pandemic has been an intense learning curve for medical staff in our neonatal wards at Tygerberg Hospital. We have used a combination of face-to-face teaching of all cadres of staff, as well as short videos, written guidance, and posters in the clinical areas. We've stepped up our communication with staff through guidelines and training on how to reduce stigma, use PPE correctly and how to clean surfaces and equipment. We have made use of web-based applications to store updated guidelines for easy access, especially as guidance is frequently updated as new evidence becomes available.

We've also introduced a system in each ward, where nurses report IPC issues and concerns to the IPC practitioners and we have increased the frequency of audits to check that controls are in place.

In neonatal wards, expressed breast milk is extremely important in the care of preterm and term babies. We have put policies in place about how to clean glass jars with expressed breast milk, and how to sanitise bottles to prevent any possible transmission of the Coronavirus.

Clearly this is a team effort. You can have all the appropriate policies, but implementation is what counts. Hospital management has a key role to play through clear communication with staff, managing fear and false information and securing more staff and PPE.

We expect lessons learnt from COVID-19 will also stand us in good stead in our work with the National Neonatal Sepsis Task Force, which was set up last September. The task force is made up of experts from hospitals across South Africa. It provides technical advice and guidance on surveillance on neonatal sepsis, which is caused by bacterial infections and is a major cause of death among newborn babies. The task force is also working on ways to better prevent infections, such as hospital-acquired pneumonia, urinary tract, and bloodstream infections as well as hospital outbreaks in neonatal units.

The pipeline of new agents to treat Anti-Microbial Resistant (AMR) infections is very limited, so by doing good IPC, we can limit the spread of AMR pathogens and reduce the need for very broad-spectrum antibiotic therapy.

COVID-19 has posed challenges that we could never have imagined this time last year. It's been a tough journey, but we are learning and growing through the experience. The importance of basic concepts such as surface cleaning and washing hands in the time of the coronavirus has improved practices in our wards and has also cascaded into the community.

We are optimistic that the good habits people have learnt during COVID-19 may help reduce bacterial infections, as well as other respiratory virus and diarrhoeal disease transmissions in the long run.

We are hopeful that through the gloom of the pandemic, we will emerge more capable to protect babies and their mothers, and promote better health and hygiene in our hospitals, homes and communities.

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http://www0.sun.ac.za/vivus/vivus-2-aug-2020/general/vital-to-protect-newborns-and-their-mothers-against-covid-19.html

Healthcare worker Covid-19 infections: hoping for the best but prepared for the worst

On 3 June, the International Council of Nurses (ICN) implored governments to compile data on healthcare worker (HCW) Covid-19 infections and deaths.

As yet there is no global registry to track the pandemic's impact on HCWs, although it has infected an estimated 230 000 and led to the deaths of 600 nurses. Analysis by the ICN suggests that on average, 7% of all Covid-19 cases worldwide occur among HCWs. Notable exceptions include some high-income countries (USA, Spain and Ireland) where HCWs account for 15–30% of all infections.

Staff infection rates decline

There is a clear need to collect standardised epidemiological data on HCW infections to identify risk factors for Covid-19 infections and deaths, with few published studies to date. A single hospital study of 9 000 HCWs in Wuhan identified a 1% staff infection rate, mainly affecting female nurses under 45 years of age with

mild disease. The risk of infection was highest in Covid-19 low-risk areas of the hospital, suggesting a lack of awareness among these HCW.

Staff infection rates declined rapidly as the outbreak progressed, possibly owing to enhanced HCW training, preparedness, and compliance with infection prevention measures. In a study from two Dutch hospitals early in the pandemic, less than 1% of 9 705 HCWs became infected. The infected staff worked in 52 different hospital departments, suggesting infection acquisition in the community rather than as part of a hospital outbreak.

South African HCWs have not been spared, with 511 HCW infections accounting for 7% of cases nationally by 6 May 2020.(4) As the outbreak gathers pace, our HCWs will be increasingly exposed to Covid-19 in the workplace, on public transport and in communities.

Many will fall ill, although a large proportion will remain asymptomatic, and at risk of unknowingly transmitting infection to others (rates of asymptomatic disease range from 10-80%). In common with the country's population, many HCWs are at risk for severe Covid-19 disease due to underlying conditions such as hypertension, diabetes, HIV or obesity.

As Covid-19 infections accelerate, HCW absences due to illness and death will exacerbate pre-existing staff shortages. Even among HCWs who remain healthy, Covid-19 will contribute to chronic fatigue, psychological distress, and potential burnout.

Community-acquired infections

These negative direct and indirect effects of Covid-19 are already being experienced in many Cape Town hospitals, with staff fearing for their own safety and that of their patients, colleagues, and family members. Numbers of HCW infections and deaths have risen in tandem with increasing community infection rates, prompting labour unions to demand an investigation of HCW safety in public hospitals.

In the Cape Metro's largest facility (Tygerberg Hospital), approximately 6% of staff were diagnosed with Covid-19 infection between 1 April and 31 May (296/4 672 staff members). It is not possible to establish definitively whether these infections were acquired in the community, on public transport or in the workplace.

Similar to the Dutch Covid-19 HCW infection study, HCW infections at Tygerberg Hospital have occurred in over 50 different areas and wards, suggesting that a substantial proportion may be community-acquired rather than healthcare-associated. Indeed, three-quarters of staff diagnosed with Covid-19 infection work in non-clinical areas and Covid low-risk wards (where contact with Covid-infected patients would be absent or minimal), strengthening the likelihood that these infections were not acquired through clinical or patient contact.

It is unclear why the Western Cape and South African HCW Covid-19 infection rates are much higher than that reported from the Wuhan and Dutch hospitals. However, local HCW infection rates are in keeping with the global estimates suggested by ICN and could reflect high Covid-19 exposure in the community, as well as a need to further strengthen infection prevention practices in communities and healthcare settings.

Multiple safety measures

Given the delayed Covid-19 introduction to South Africa and the flattening of the outbreak curve achieved by the national lockdown, our healthcare facilities, fortunately, had more time to prepare than many countries.

At Tygerberg Hospital, a co-ordinated infection prevention and occupational health plan was enacted to mitigate the risk of Covid-19 infection transmission to staff and patients. Multiple measures were implemented to support staff and patient safety including:

- A Covid-19 risk assessment per department with identification of high-risk staff who required

medical shielding by re-deployment to low-risk areas

- Covid-19 prevention training for all categories of staff as well as daily Covid-19 educational and support messages for staff
- Daily Covid-19 symptom screening of all staff, patients and paediatric inpatient's caregivers visitor restrictions
- A universal masking policy for staff and patients and provision of hand sanitiser at all entrances and clinical areas
- Enhanced surface and equipment cleaning and disinfection, and evaluation of symptomatic staff with priority SARS-CoV-2 testing
- A secure supply chain for personal protective equipment (PPE) including prudent use and onsite ultraviolet decontamination of N95 respirators
- Building of showers for staff to use after shifts and installation of extraction fans and air-handling units in ICU areas

Notwithstanding these many active measures to enhance staff and patient safety during the Covid-19 pandemic, there remain several challenges at Tygerberg Hospital and other healthcare facilities in our country. These include ageing hospital structures with minimal provision for patient isolation, inadequate bed spacing, lack of dedicated space for donning and removal of PPE and low staff to patient ratios, particularly for nurses and cleaners.

Despite the many challenges and the fraught working conditions, South Africa's HCWs consistently demonstrate their optimism, tenacity, and willingness to adapt to and overcome obstacles. It is this resilience that gives HCWs, including those at Tygerberg Hospital, faith to hope for the best while at the same time preparing for the worst that Covid-19 may bring.

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https://www.news24.com/health24/medical/infectious-diseases/coronavirus/opinion-healthcare-worker-covid-19-infections-hoping-for-the-best-but-prepared-for-the-worst-20200621

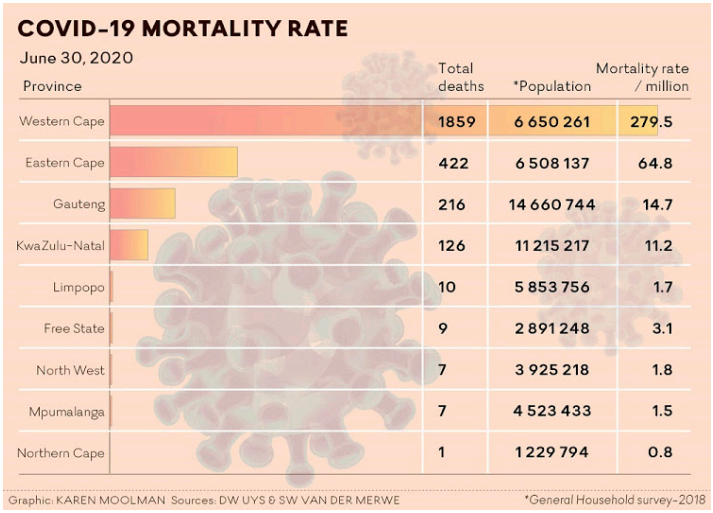
Why is the Covid-19 mortality rate so high in the Western Cape?

Altitude plays a role, as do UV radiation levels and the weather

Since the start of the Covid-19 pandemic at the end of 2019 there has been much speculation about whether the impact of the coronavirus varies at different altitudes. Currently, the mortality per million people in the Western Cape is 279.5. This is 19 times higher than the mortality per million people in Gauteng

Why is this? One theory is that the proportions of people with HIV/Aids or TB could be higher in the Western Cape than in the rest of the country. It could also be that the age distribution in the Western Cape differs from that in other provinces.

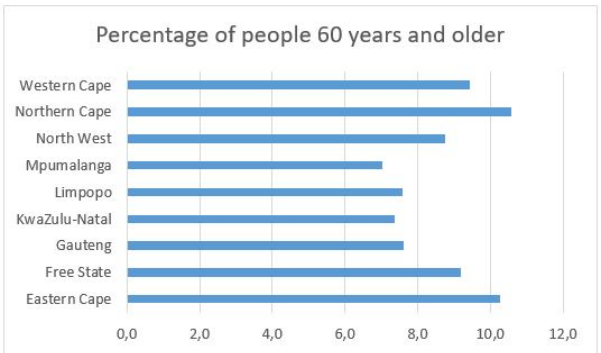
However, according to the 2018 General Household Survey (GHS) this does not seem to be the case.

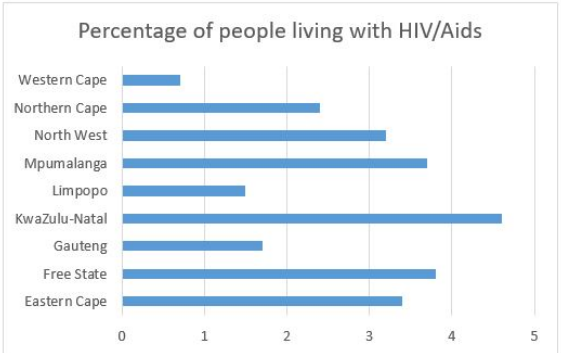


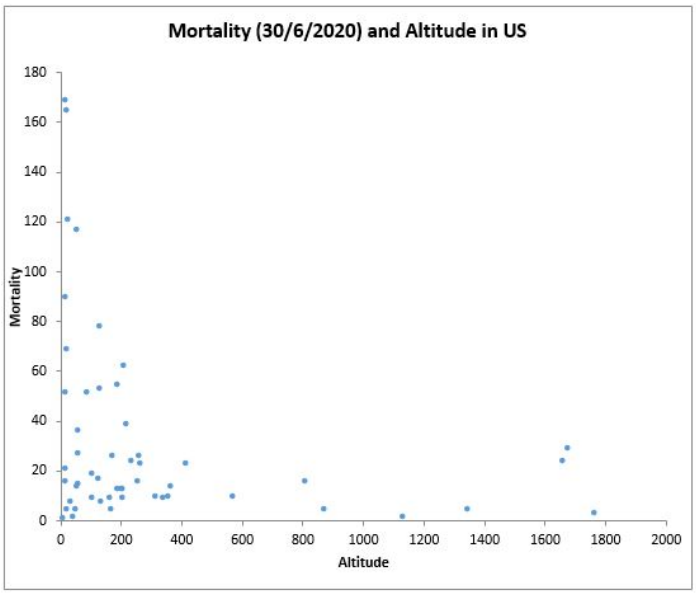
However, more than 60% of the population in the Western Cape live in the City of Cape Town, meaning a large number of people in this province live at sea level. Does this low altitude contribute to the high mortality rate in the province?

An epidemiological analysis of the Covid-19 pandemic by Arias-Reyes et al (2020) showed a decrease of prevalence and impact of the virus in populations living at altitudes higher than 2,500m. Their study analysed the occurrence of Covid-19 in China, Bolivia and Ecuador, and concluded that the Covid-19 mortality rate per capita decreases as altitude increases.

The US is currently one of the countries hardest hit by the Covid-19 pandemic. Most major cities in the US are at sea level, or near navigable rivers. If the weighted average altitudes of the five largest cities in each of the 52 states (or six, if the state capital is not one of the largest five cities) are compared to the number of deaths per hundred thousand people in each of the states, the scatter plot indicates that at altitudes higher than 300m the mortality rate is significantly lower.







Thus, states in the US with large, high-altitude cities are less affected by Covid-19.

The question is how to explain the apparent relation between mortality rate and altitude. There is an increase in solar ultraviolet (UV) radiation with altitude (Blumthaler et al, 1996). Some other factors related to In an academic research paper submitted for publication by Bäcker (2020), he shows that there is slower Covid-19 morbidity and mortality growth at higher solar irradiance and elevation. His results suggest that transmission models should incorporate solar elevation, and that the impact of UV radiation on individual morbidity and mortality should be tested.

The lower UV radiation at sea level, as well as the large amount of cloud cover during the winter months, may further contribute to the high mortality rate in the Western Cape. Sunny winter days — typical in Gauteng and other inland provinces at this time of the year — may assist in restricting the spread of the virus in these provinces.

In SA, inhabited altitudes fluctuate considerably. According to the 2018 GHS, 58% of the SA population live in inland provinces, compared to 42% in coastal ones. If we accept the altitude and UV radiation hypothesis, we would expect the mortality rate in all three coastal provinces to be similar. The Western Cape, however, has more cloud cover and a lower solar elevation than the Eastern Cape and KwaZulu-Natal.

In the Western Cape, a larger percentage of people also live at sea level compared to the Eastern Cape (29% of the population live in Nelson Mandela Bay and Buffalo City districts) and in KwaZulu-Natal (34% of the population live in the eThekwini Metropolitan district).

Altitude and UV radiation are, of course, not the only factors influencing mortality, but within the SA context it could explain why the Western Cape has a higher mortality rate than the rest of the country. The general belief in SA is that the mortality rate in the Western Cape is higher because the province is "ahead" of other provinces on the inevitable upward surge of infections. This implies that other provinces will catch up in terms of mortality rates in the coming months.

However, if altitude and UV radiation do play a role, the mortality rates of the inland provinces may continue to be lower than those of the coastal provinces.

Bäcker (2020) suggests that the significant reduction in the pandemic's growth observed at higher solar elevations across geographic locations can help governments plan their response to the crisis. He also suggests that, should sunlight give more resistance to Covid-19, the correct policy may be one that achieves social-distancing without locking people in.

What are the implications if this hypothesis holds water? We recommend the following.

First, a much earlier lifting of the lockdown for the inland provinces. Second, though difficult to achieve, vulnerable and older people could be moved to higher altitude areas with more winter sun and, thus, UV radiation. Third, medical resources and personnel allocation could be prioritised in the higher risk provinces, that is areas in the Western and Eastern Cape.

Fourth, new methods to reduce the spread of the virus can be investigated if it can be established whether UV radiation, indeed, reduces its contagiousness. Lastly, since germicidal UV is a standard practice deployed in

altitude are solar elevation (the closer to the equator, the higher UV radiation levels); cloud cover (UV radiation levels are highest under cloudless skies); and pollution levels and ozone levels (ozone absorbs some of the UV radiation that would otherwise reach the Earth's surface).

sterilisation protocols, UV lights can be used to sanitise surfaces and goods.

In conclusion, if the pandemic can be proven to have less impact in the inland provinces it will boost offshore investment in SA. It will also be beneficial for tourism in the coming spring and summer of 2020/2021. Striving to have less polluted air with higher levels of UV radiation in SA is a worthy cause, thus promoting renewable energy initiatives as they cause less air pollution than coal-fired power stations.

Mortality numbers in many other Southern African countries, such as Namibia, Angola, Botswana, Zambia and Zimbabwe, are very low (admittedly, these numbers are not necessarily reliable). All these countries receive summer rainfall, similar to the northern parts of SA, have a higher solar elevation and a high percentage of the population living at high altitude.

Recommendations made for SA's inland provinces could also be implemented in these countries.

There are still many unknown factors regarding the virus. If the theory posited above is true, more research is needed to understand the exact reasons why higher UV radiation and altitude influence the spread and the mortality rate caused by the virus.

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https://www.businesslive.co.za/bd/opinion/2020-07-02-why-is-the-covid-19-mortality-rate-so-high-in-the-western-cape/

MENTAL HEALTH

In This Section

Covid-19: May be prudent to over-estimate the mental health consequences of the virus

The Covid-19 pandemic has affected millions around the world and damaged the mental well-being of many.

This damage may be hard to reverse without prompt action. Coupled with the social isolation linked to the prolonged lockdown, the pandemic is expected to lead to new episodes of mental illness for many South Africans and exacerbate pre-existing mental illness.

Thirty months after the SARS outbreak in 2003 (the first massive infectious disease outbreak of the 21st century), a third of survivors met criteria for any psychiatric disorder; a quarter met criteria for post-traumatic stress disorder (PTSD); and approximately 16% had depressive disorders. These statistics underscore the importance of detecting and treating psychiatric illness in people with Covid-19, and in their contacts.

We cannot ignore the profound negative effects of stress, fear, profound loss and grief. If evidence from other countries is anything to go by, the physical and mental health, and social and economic impacts of the disease, will be inordinately borne by poor South Africans (more than 50% of South Africans live below the poverty line). Billions of people around the world have either been or currently are in full or partial lockdown. This may be a mammoth "experiment" but the consequent physical distancing has undoubtedly slowed the transmission chain.

Stressors during the pandemic

That said, the pandemic and the lockdown, independently and in combination, have unintended consequences by severing family ties and inhibiting social norms, values and rituals, and will arguably exert a severe toll on the mental health of people – not only in the immediate and short-term but for many years to come.

Quarantines can lead to PTSD symptoms, depression, and alcohol abuse and dependence, with some evidence that quarantines of longer duration are associated with poorer mental health, specifically PTSD, over time. During previous infectious disease epidemics, common stressors endorsed during quarantine were a long period of quarantine, fears of being infected, frustration, boredom, shortage of supplies, inadequate information from public health authorities, financial loss, and stigma. These are all stressors that are being endorsed during the current pandemic.

Research on the mental health consequences of economic crises has taught us about the significant relationship between severe economic recession and population-level psychological distress, including the emergence, and worsening, of mood, anxiety and substance-related disorders and suicide. Physical isolation, economic worries, heightened anxiety and guilt (about exposing others to the virus or not doing enough to help others) are all risk factors for suicidal behaviours (this includes suicidal thoughts, attempts, and completed suicide).

In a recent article, Danny Horesh and Adam Brown contend that like other mass traumatic events, the Covid-19 pandemic is expected to result in PTSD, with typical features of hypervigilance (centred on protective measures to avoid infection), intrusive thoughts (related to infection, health, fears of dying), avoidance, and negative mood and cognitions (around fears of the world changing and the future being bleak) that will be subjectively distressing and persistently impact on day-to-day functioning over time.

Unique challenges

In the face of the restrictions and accompanying economic hardship, South Africa's youth and persons with pre-existing mental illness may be especially hard hit by the potentially severe and long-term mental health consequences of the Covid-19 crisis. The stress, fear and emotional pain induced by the rapid and aggressive spread of infection, as well as the scale of prolonged grief from the sudden and massive loss of life, will be felt for a long time, and by successive generations. Like other pandemics, this one is also characterised by unpredictability, widespread community impact, mass fatalities, and persistence as American scholars Ginny Sprang and Miriam Silman have pointed out.

The COVID-19 pandemic also poses unique challenges for the management of hospital inpatients and outpatients with psychiatric illnesses. Prior to the pandemic, psychiatric services in our public sector, especially at district and community levels, were already overstretched and under-resourced in terms of bed capacity and shortages of mental health personnel.

The deployment of these staff within hospitals to assist with the screening and management of suspected and confirmed Covid-19 cases in general medical settings,

and the closure of psychiatric wards because of Covid-19 infection, further add to the challenge of providing adequate psychiatric care. Psychiatric units in public hospitals are typically characterised by bed shortages, overcrowding and sharing of dining, bathroom and daily activity spaces (e.g. for group activities such as occupational therapy and group psychotherapy).

Given their compromised and disordered mental states, disorganised behaviour, impulsivity, sub-optimal self-care and impaired insight, patients with mental illness may not be in a position to adhere to infection prevention and control measures and protect themselves in the face of Covid-19. Those who cannot access outpatient care may be left to self-manage their mental and physical health, as Benjamin Druss from Emory University argued recently.

Mental health system needs urgent strengthening

Existing social isolation, loneliness, homelessness, poorer physical health in patients with serious mental illness (e.g. schizophrenia, bipolar illness), overweight/obesity, lack of exercise and other unhealthy lifestyle factors associated with psychiatric illness, and the side effects of psychotropic medication, are added risks. As a result of the high rates of co-occurring physical illness (e.g. diabetes, cardiovascular disease) – at least two-fold higher than the general population – patients with mental illness have a heightened vulnerability to developing Covid-19 pneumonia and other complications.

Our mental health system needs urgent strengthening through multi-sectoral interventions targeting mental health, well-being, and resilience, for both the general population and for vulnerable groups. This includes, but is not limited to, health care workers, women, youth, the elderly, and the mentally ill. These interventions should be embedded in the general medical Covid-19 pandemic care that is already being provided.

More than ever, given the scale of the pandemic, we need sound research to learn more about the psychiatric and neurological manifestations and their impact in our general population and in vulnerable groups. There are already several research studies currently underway at Stellenbosch University, and a number of these are collaborative multi-country initiatives (e.g., www.coh-fit.com). As this is a novel, ravaging virus, it may be prudent to over-estimate the mental health sequelae and the resources that will be required. We can harness the interconnectedness and the tremendous co-ordinated response from the health sector that Covid-19 has necessitated to achieve this.

PROF SORAYA SEEDAT, PSYCHIATRY

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https://www.news24.com/health24/Medical/Infectious-diseases/Coronavirus/opinion-covid-19-may-be-prudent-to-over-estimate-the-mental-health-consequences-of-the-virus-20200526-2

Looking after your mental health during the COVID-19 crisis

The COVID-19 crisis has disrupted our world and plunged us into a time of great uncertainty. Under these circumstances, it is quite common for people to be worried, distressed, and anxious about what lies ahead. There is, however, no reason to regard anyone who feels afraid and anxious during these difficult times as being psychologically abnormal. We still have some time to go before the lockdown is over and almost everyone will be having some of these feelings at some point.

However, the constant stream of news reports about the COVID-19 pandemic can lead to a rise in levels of anxiety. If this is the case, then one should limit the amount of time spent listening to or watching the news. It is, of course, necessary to get the facts – not rumours, misinformation and fake news – and we should seek information only from trusted sources. This will help us all take practical steps to make plans and protect our own mental health and that of our loved ones.

This is also a time to support others as helping other people in their time of need can benefit both the person receiving support and the helper. For example, checking by telephone on neighbours or people in your community who may need some assistance. Perhaps when leaving the house to buy supplies for yourself, it can be helpful to buy extra food for people who have no means, and whom government and NGOs might not be able to help during this difficult period.

For most people, living in lockdown for three weeks can be very stressful. It can be useful to structure the day with activities such as doing schoolwork and housework,

working from home if your job allows, exercising, having some quiet time, watching TV and reading, spending

some time with others and also spending some time alone. For many people, prayer or meditation can be quite helpful.

Social engagement is of course very important. Human beings are by nature social beings and staying in touch with friends and family by phone or texting is necessary to maintain a sense of community and togetherness in this time of crisis.

Probably people who already have a mental health condition such as major depression or generalised anxiety may have exacerbated symptoms and therefore staying in touch with a mental health professional will be quite important. Many psychologists, psychiatrists and counsellors will in all likelihood be available to their patients by phone or skype which can be quite important in helping people feel supported during this difficult time. Resources such as Lifeline can be helpful for others who are not in the care of a mental health professional. The South African Depression and Anxiety Group (www.sadag.org) has some useful resources on its website, including information on apps that can help people reduce stress and anxiety and feel some relief from psychological distress. Also, positive social and family support during this time can help people feel less alone and vulnerable.

We live in an era of technology and so many people find it convenient to use texting, WhatsApp, Skype, email, Instagram, and Facebook to check up on each other and stay connected. For those who lack access to social media, to the internet and to data, staying in touch with neighbours at a safe distance, writing letters and keeping a journal can be helpful under these circumstances.

In as much as there is a danger of information overload, it is necessary to keep abreast of what is going on and to understand clearly what the minister of health and the president want us to know. We live in a society in which our political leaders have let us down countless times, leading many of us to regard them with scepticism. However, this is a time to listen to authority. We really do need to heed the message of the lockdown. It will save lives and help to ensure that our health care system can cope with the numbers of people who will require services.

It is also important to honour carers and healthcare workers who support people affected with COVID-19. These brave souls play an important role in saving lives. Also, as the number of people infected with COVID-19 starts to rise, we should avoid stigmatising and discriminating, but rather offer our support, compassion, and kindness. We should not refer to people who are infected as “victims", “COVID-19 families" or “the diseased". They are “people who have COVID-19", “people who are being treated for COVID-19", or “people who are recovering from COVID-19".

At the moment it is hard to see what positive things can come out of this experience. It is by all accounts a stressful and difficult time for everyone. But perhaps it's also an opportunity for us to acknowledge our shared humanity, the fragility of the human condition, and the fact that we are all in this together, no matter how divided our society might be.

PROF ASHRAF KAGEE, DEPARTMENT OF PSYCHOLOG

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https://www.sun.ac.za/ENGLISH/LISTS/NEWS/DISPFORM.ASPX?ID=7243

Urgent mental health intervention needed during COVID-19 pandemic

The COVID-19 pandemic has damaged the mental well-being of many people. This damage may be hard to reverse without prompt action, argues Prof Soraya Seedat from the Department of Psychiatry in an opinion piece for News24.

The COVID-19 pandemic has sickened millions around the world and also damaged the mental well-being of many. This damage may be hard to reverse without prompt action. Coupled with the social isolation linked to the prolonged lockdown, the pandemic is expected to lead to new episodes of mental illness for many South Africans and exacerbate pre-existing mental illness. Thirty months after the SARS outbreak in 2003 (the first massive infectious disease outbreak of the 21st century), a third of survivors met criteria for any psychiatric disorder, a quarter met criteria for post-traumatic stress disorder (PTSD), and approximately 16% had depressive disorders. These statistics underscore the importance of detecting and treating psychiatric illness in people with COVID-19, and in their contacts.

We cannot ignore the profound negative effects of stress, fear, profound loss, and grief. If evidence from other countries is anything to go by, the physical and mental health, and social and economic impacts of the disease, will be inordinately borne by poor South Africans (more than 50% of South Africans live below the poverty line). Billions of people around the world have either been or currently are in full or partial lockdown. This may be a mammoth 'experiment' but the consequent physical distancing has undoubtedly slowed the transmission chain. That said, the pandemic and the

lockdown, independently and in combination, have unintended consequences by severing family ties and inhibiting social norms, values and rituals, and will arguably exert a severe toll on the mental health of people – not only in the immediate and short-term but for many years to come.

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In a recent article, Danny Horesh and Adam Brown contend that like other mass traumatic events, the COVID-19 pandemic is expected to result in PTSD, with typical features of hypervigilance (centred on protective measures to avoid infection), intrusive thoughts (related to infection, health, fears of dying), avoidance, and negative mood and cognitions (around fears of the world changing and the future being bleak) that will be subjectively distressing and persistently impact on day-to-day functioning over time.

In the face of the restrictions and accompanying economic hardship, South Africa's youth and persons with pre-existing mental illness may be especially hard hit by the potentially severe and long-term mental health consequences of the COVID-19 crisis. The stress, fear and emotional pain induced by the rapid and aggressive spread of infection, as well as the scale of prolonged grief from the sudden and massive loss of life, will be felt for a long time, and by successive generations. Like other pandemics, this one is also characterised by unpredictability, widespread community impact, mass fatalities, and persistence as American scholars Ginny Sprang and Miriam Silman have pointed out.

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Given their compromised and disordered mental states, disorganized behaviour, impulsivity, suboptimal self-care and impaired insight, patients with mental illness may not be in a position to adhere to infection prevention and control measures and protect themselves in the face of COVID-19. Those who cannot access outpatient care may be left to self-manage their mental and physical health, as Benjamin Druss from Emory University argued recently. Existing social isolation, loneliness, homelessness, poorer physical health in patients with serious mental illness (e.g. schizophrenia, bipolar illness), overweight/obesity, lack of exercise and other unhealthy lifestyle factors associated with psychiatric illness, and the side effects of psychotropic medication, are added risks. As a result of the high rates of co-occurring physical illness (e.g. diabetes, cardiovascular disease) – at least two-fold higher than the general population – patients with mental illness have a heightened vulnerability to developing COVID-19 pneumonia and other complications.

Our mental health system needs urgent strengthening through multi-sectoral interventions targeting mental health, well-being and resilience, for both the general population and for vulnerable groups. This includes, but is not limited to, health care workers, women, youth, the elderly, and the mentally ill. These interventions should be embedded in the general medical COVID-19 pandemic care that is already being provided.

More than ever, given the scale of the pandemic, we need sound research to learn more about the psychiatric and neurological manifestations and their impact in our general population and in vulnerable groups. There are already several research studies currently under way at my institution Stellenbosch University and a number of these are collaborative multi-country initiatives (e.g., www.coh-fit.com). As this is a novel, ravaging virus, it may be prudent to over-estimate the mental health sequelae and the resources that will be required. We can harness the interconnectedness and the tremendous co-ordinated response from the health sector that COVID-19 has necessitated to achieve this.

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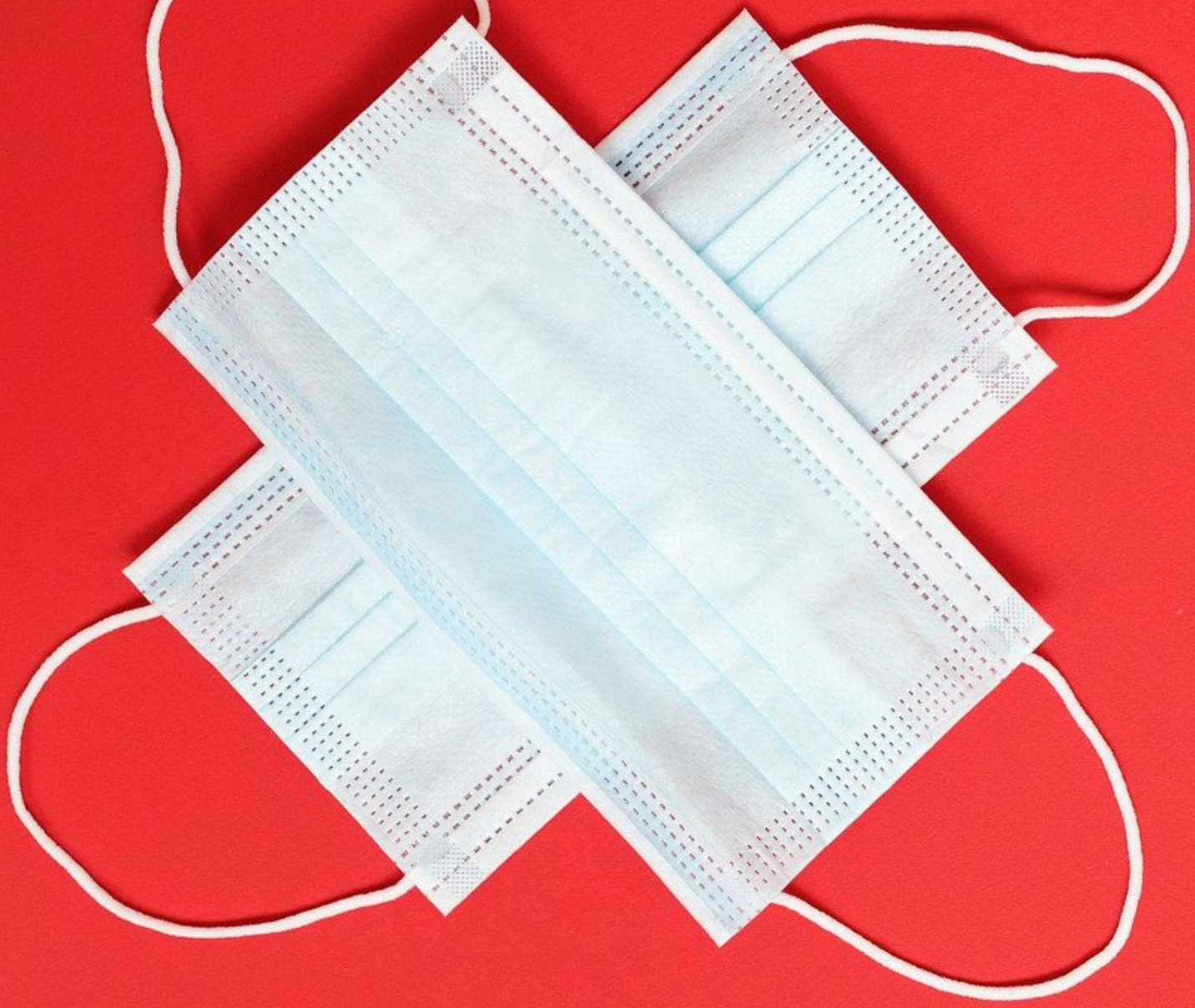
http://www0.sun.ac.za/vivus/vivus-2-aug-2020/innovation/urgent-mental-health-intervention-needed-during-covid-19-pandemic.html

MASKED UP



In This Section

The matter of masks

Beating Covid requires behavioural change. But that's not going to come from coercion; the government needs to inspire compliance through grassroots organisation

President Cyril Ramaphosa likes to remind us that Covid-19 is caused by a virus but spread by human contact and behaviour. It is, indeed, important to acknowledge that the spread of the disease will be determined by the choices we make and how we behave.

But it is troubling how often the government has relied on fear, fines, and brute force to force behavioural change. For example, hundreds of thousands of arrests were made in an attempt to enforce social distancing and stay-at-home policies. It is easy to interpret this as both a sad reflection of our broken society and of our lack of trust in the government. But it should be acknowledged that, at least in the initial phases of the pandemic, there was substantial urgency and peril, and it was understandable that the government resorted to command-and-control strategies and high-stakes penalties.

Many experts now say that the coronavirus is likely to remain a threat until 2022 — which means we need a change of strategy.

Behavioural change and social norms cannot be legislated or established by decree; they are promoted, encouraged and nurtured through grassroots partnerships with local champions. This has been true of the HIV/Aids epidemic and it is true of the current pandemic.

In the recent National Income Dynamics Survey: Coronavirus Rapid Mobile Response Survey (Nids-Cram), we found only half (53%) of the more than 7,000 respondents wore masks.

Studies have shown that for masks to have an effect on infections and the trajectory of the disease, at least eight in 10 people would need to wear them.

One can also argue that widespread compliance with mask-wearing is even more important where, as in much of SA, dense neighbourhoods make it difficult to avoid close contact. But we found that only 35% of respondents complied with both mask-wearing and either avoiding any contact with people or avoiding close contact.

On Sunday the government said it was responding to low compliance by making it mandatory to wear a mask in public places; enforcement has now become the responsibility of employers, shop owners, managers, and public transport operators.

The concern, however, is that this may do more harm than good. Given the high burden already borne by shop owners and facility managers, it may result in superficial compliance. For instance, shop owners or operators may keep a number of "communal" masks at hand for those who don't comply, but then recycle these through the day. That would be not only unhelpful, but actively harmful.

The fundamental challenge is to motivate people to behave responsibly for the benefit of others: the elderly are the most likely to die from the virus, but prime-age adults are more likely to be infected. This problem is likely to grow, as we encounter an increasing number of first-hand stories of successful recoveries that counter the fearful narratives we read in the media. The panic will subside, and the fears will fade.

For this reason, it's important to invest in community-based initiatives, with local champions to establish social norms and an understanding of the importance of social solidarity. We need less fear and coercion, and more inspiration and hope; more bottom-up engagement, fewer top-down orders.

Fear can be counterproductive, discouraging people from seeking care. Administrative data has already shown decreases in primary health-care utilisation, such as antenatal care visits, vaccinations, HIV check-ups and TB tests. The government has reported a 50% reduction in TB tests carried out, and a 30% decline in measles vaccinations.

In an SMS survey of more than 3,000 new mothers and pregnant women who rely on the public sector for health care, we found that one in four had missed vaccinations and one in 10 of those who need antiretroviral treatment reported running out.

Both groups overwhelmingly cited coronavirus fears as the reason for missed clinic visits. Such fears are higher in poor and vulnerable communities.

The government's continued reliance on regulation is concerning and may reflect a disconnect with the communities it represents and governs. It is clear that change is required to enhance the government's

community responsiveness and engagement — but that may be an uphill battle.

During the lockdown, it has been encouraging to see some inspired and strong leadership from Ramaphosa. At his best, he gave us not only a reason to believe that he will lead us through this storm, but also vision of a shared future beyond this pandemic.

Such a vision of hope is what we need to propel SA forward. To sustain the strength and resilience that's required, we need a vision of how we will repair relationships of trust and respect to create more functional and responsive systems. To navigate the coming calamities and challenges, we need to turn away from fear and subjugation, and foster change in the name of hope.

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https://www.businesslive.co.za/fm/features/2020-07-15-the-matter-of-masks/

COVID-19: The science and policy calculous behind SA's new mask recommendations

Health Minister Dr Zweli Mkhize recommended that members of the public wear cloth face masks of at least three layers. In so doing, Mkhize gave much needed direction on an issue that created much uncertainty.

What is the big deal about masks?

The question as to whether members of the public should be wearing face masks during the global pandemic has been hotly debated globally, with experts expressing divergent views, different countries and authorities giving conflicting advice, ranging from "avoid wearing masks for people who are well", across the spectrum of "use cautiously", to advocating widespread face mask use for the general population.

In South Africa to date, the messaging has until now been consistent with the World Health Organisation (WHO) recommendation that the only people who needed to wear face masks, outside the healthcare setting, were people who were ill or those who were treating them. A flurry of confusion arose when transport regulations issued under the Disaster Management Act required passengers using public transport to wear masks. Subsequently a policy guideline was issued on 2 April by Western Cape Department of Health, indicating that as the epidemic unfolds, the wider use of masks is indicated even for people who are not ill, especially if they move around in public. And finally on 10 April the National Department of Health recommended the widespread use of cloth masks.

What are the issues under debate?

Arguments against mass mask use:

• We need to save valuable face masks for health professionals, especially given global shortages of personal protective equipment (PPE).

• People don't use them properly, either leaving nose uncovered, or touching the mask during use or removal, therefore risking transfer of virus to hands, eyes, nose and surfaces.

• People find them uncomfortable and thus don't wear them most of the time, defeating the point of mask-wearing.

• Inappropriate disposal may cause harm, as moist and unwashed masks containing Sars-CoV-2 may become a vector for transmission.

• Used too early in the epidemic, mask-wearing may result in compliance fatigue later at high prevalence levels when it may be of greatest benefit.

• Stigma may be associated with face mask use, either because it identifies the wearer as contagious, or as a hoarder.
• Mask-wearing provides incomplete protection for the wearer especially without eye protection.

• Face masks provide a false sense of security, so wearers may reduce the other measures, like hand-washing and social distancing, and end up taking more risks.

Similarly, there are also arguments for universal use of facemasks• Any additional, even partial, reduction of transmission would be advantageous to slowing the epidemic.

• Used in combination with other measures, mask-wearing can assist to “flatten the curve" and reduce the speed at which the virus spreads.

• Face masks may provide protection where physical distancing is not possible due to socio-economic circumstances, such as informal settlements, and where handwashing is difficult due to inadequate water supply and sanitation.

• Mask-wearing may protect against asymptomatic or pre-symptomatic transmission, a concerning trend noted in recent weeks.

• Mask-wearing may act as a symbol of hope, shared responsibility and collective action to a life altering pandemic.

Understanding the spread of COVID-19 and how masks might stop the spread

COVID-19 is caused by the SARS-CoV-2 virus and spreads from person-to-person through respiratory droplets produced when an infected person coughs or sneezes, and from touching contaminated surfaces. Reducing transmission therefore revolves around preventing person-to-person spread, by avoiding close contact (physical distancing), and using infection prevention and control (IPC) measures, including hand-hygiene, respiratory hygiene, and personal protective equipment (PPE) such as face masks.

Droplets sprayed during coughing, sneezing, or exhaling can be blocked by a face mask, to a greater and lesser degree dependent on the type of face mask. Face masks are critical in healthcare settings to protect healthcare workers from becoming infected when treating known and unknown cases. Knowing that PPE including face masks help protect health care workers, it appears a logical next step to promote face mask wearing in community settings to prevent transmission in the general population.

But, does it work at a population level?

Extrapolating from health care worker protection, the assumption is that “my mask protects me", in other words, the wearer is protected from being infected by a positive case. Whereas it is in fact more likely that the greatest benefit as a public health measure is that “my mask protects you, your mask protects me", in other words, the wearer is taking the precaution that they may be positive and ensuring that they do not spread it to others.

What does the science say?

Limited evidence is available about COVID-19 and public health prevention measures given that the epidemic is only 100 days old globally. We therefore consider scientific evidence of similar viruses and illnesses such as influenza to guide us.

The evidence for “my mask protects me".

• In the laboratory setting, all types of masks reduced aerosol exposure to a simulated infectious agent, with N95 respirators more efficient than surgical masks, which were more efficient than home-made masks.

• In the community setting, three cluster randomised trials evaluated the effectiveness of medical masks versus no masks for protecting wearers from acquiring influenza-like infection. Together these trials provide evidence of low certainty that medical masks may reduce the chance of infection by 8% compared to no masks.

The evidence for “my mask protects you, your mask protects me".

• In the laboratory setting, a recent study involving 246 patients demonstrated that face masks significantly reduced the detection of Sars-CoV-2 in the exhaled breath of Covid-19 patients.

• In the household setting, four cluster trials evaluated the effectiveness of medical masks versus no masks for protecting household members from acquiring infection from a household member who was ill with confirmed influenza-like illness. Together these trials provide low certainty evidence that medical masks may reduce the chance of infection by 12% compared to no masks.

In summary, there is low certainty evidence that using face masks may reduce the chance of infection and therefore community transmission.

Translating Science into Policy

When making policy recommendations to use or not use an intervention, decision-makers need to consider the trade-offs between benefits and harms presented by the scientific evidence, the certainty of the evidence, as well as factors such as values and preferences, resource implications, equity, acceptability, and feasibility.

Importantly, policy-makers need to focus on the desired outcome. In the case of COVID-19, if the goal is to “flatten the curve" as opposed to eradicating the virus, then partial protection afforded by face masks may be sufficient, despite low certainty evidence. Applying the precautionary principle (a strategy for approaching issues of potential harm when extensive scientific knowledge on the matter is lacking), may be the route to follow particularly with such a serious illness as COVID-19 with no known treatment or vaccine, spreading in an immune naive population, with deaths rising steeply, and health systems under strain.

So, implementing mask-wearing could assist with “flattening the curve", when used in combination with other measures known to reduce transmission, of isolation for individuals who are confirmed COVID-19 positive, quarantine for contacts of individuals who are confirmed COVID-19 positive, hand hygiene, respiratory hygiene, and physical distancing.

Translating policy into practice

Applying the same precautionary principle relating to potential harms, face mask usage should be accompanied by strictly adhering to safe use guidelines. Such guidelines should encompass obtaining, donning (putting on), doffing (taking off), not touching your face or mask while wearing, cleaning, disinfecting, and disposal of face mask.
In other words, "Mask plus Message" must be the essence of any implementation campaign.

It would be imperative to ensure that the "golden rules" of infection prevention and control are emphasised alongside mask-wearing.

• Hand-hygiene (regular hand washing with soap and water for 20 seconds),

• Respiratory hygiene (sneeze and cough into your bent elbow, and away from other people),

• Physical distancing (no physical contact, remain two metres away from other people),

• Reduction in gathering and congregation of people and

• Disinfecting and sanitisation of surfaces.

An important caveat is that face masks are critical in healthcare settings to protect healthcare workers from becoming infected. Given that the pandemic has led to a global shortage of PPE, including face masks and N95 respirators, these must be prioritised for healthcare workers. Homemade or cloth masks have therefore been suggested as a stop-gap in community settings in order to save medical face masks for use by healthcare workers.

Looking ahead

As we look ahead towards the end of lockdown, other measures to reduce transmission will be key. Widespread use of face masks may well be an important component of interventions to continue "flattening the curve" and mitigate the inevitable tsunami of COVID-19 cases. Mask-wearing may also act as a symbol of hope, shared responsibility and collective action to a life altering pandemic.

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http://www0.sun.ac.za/vivus/vivus-april-2020/general/covid-19-the-science-and-policy-calculous-behind-sa-and-rsquos-new-mask-recommendations.html

African countries are moving to make masks mandatory: key questions answered

Many countries, including South Africa and Nigeria in Africa, are moving to make it mandatory to wear non-medical cloth masks when people are outside their homes. The move is seen as a vital additional measure to prevent the spread of SARS-CoV-2, the novel coronavirus causing COVID-19.

Wearing cloth masks is being introduced in conjunction with maintaining a physical distance of at least 1.5 metres and strictly following hygiene measures such as hand washing, good cough etiquette, and decontamination of regularly used surfaces.

Medical face masks have been a vital part of COVID-19 prevention efforts in East Asian countries such as China, Taiwan, Hong Kong and South Korea.

In countries where medical face masks are preserved for healthcare workers or are scarce, fabric face masks provide a cost-effective alternative. These can be homemade and are reusable.

There has been a growing movement of homemade mask production. Factories have also repurposed to produce fabric face masks to support commercial and free distribution.

In South Africa wearing a cloth mask in public places is now mandatory. In our view, there is sufficient evidence to suggest if everyone wears a mask, droplet transmission from each person will reduce and minimise exposure.

Transmission

The early phases of the COVID-19 epidemic included an evolving understanding of the routes of transmission of the coronavirus. It is now well established that droplet transmission is of vital concern. In the case

of the severe acute respiratory syndrome coronavirus in 2002, viral shedding via the respiratory tract happened mostly after people developed symptoms. But COVID-19 includes a pre-symptomatic phase where people can be infectious and still feel healthy and be unaware that they are infected. Mildly symptomatic and asymptomatic cases also occur.

Mandatory masking ensures that viral transmission by any potential carrier is markedly reduced. It emphasises the concept of "source control", in other words controlling the amount of a pathogen that is present in the environment. This is well expressed through the slogan: "I protect you, you protect me". This was popularised by the #masks4all initiative, started by a group of researchers and scientists to promote the scientific evidence showing that cloth masks limit the spread of SARS-CoV-2.

An additional benefit of the ubiquitous wearing of face masks is the reduced possibility that respiratory droplets will be released to settle on surfaces – or for smaller aerosolised particles to float in the air.

For those still in doubt, we have answered some key questions to address the biggest areas of controversy:

Why should I wear a cloth mask? To prevent potential transmission of the coronavirus that causes COVID-19 via respiratory droplets and particles released when you talk, laugh, sing, shout, cough, or sneeze, or to prevent the potential inhalation virus laden particles. A cloth face mask also serves as barrier that prevents touch transfer from surfaces to your mouth and nose and a reminder not to touch other parts of your face – especially your eyes. In addition, a face mask reduces the extent to which droplets and particles end up on surfaces or float in the air.

When should I wear a cloth mask? As a general rule, any time that you are outside your home, and especially in close contact situations such as when using public transport, shopping, working, or in any crowded setting. If a person in your household is possibly infected with coronavirus, face masks must be used when in close proximity, in conjunction with separating living quarters. Helplines and healthcare providers are good places to go for additional steps to follow.

Can I make my cloth mask out of anything? The most effective approach is to use a thicker weave material such as cotton for the outer layer, and then to include at least two layers of softer material for comfort and additional barrier protection. Test the materials combined for breathability before sewing. There should be some resistance to airflow, but you should be able to breathe freely when using the completed mask. Fit is important to minimise air bypassing the cloth barrier via the sides. Materials used should be easily washable and heat tolerant for cleaning. Stretchy material should be avoided.

How do I wear the mask? Never share a mask with anyone and always use a mask that is freshly cleaned. Wash or sanitise your hands before putting on the mask and when removing. Ensure that it covers the area from the top of your nose to below your chin. When you remove the mask, move your hands forward so you can fold the front over itself. Hold on the sides and place in a safe area for cleaning.

How do I reuse a mask? A cloth mask can be washed in hot water with soap or washed in a washing machine. Iron or sun dry. You can also drop the mask into boiled water and leave to cool to a temperature that allows you to wash the mask with soap or washing detergent. Avoid harsh chemicals such as bleach as this will be toxic when wearing the mask. By having two masks available, you can wear one, and have one to wash.

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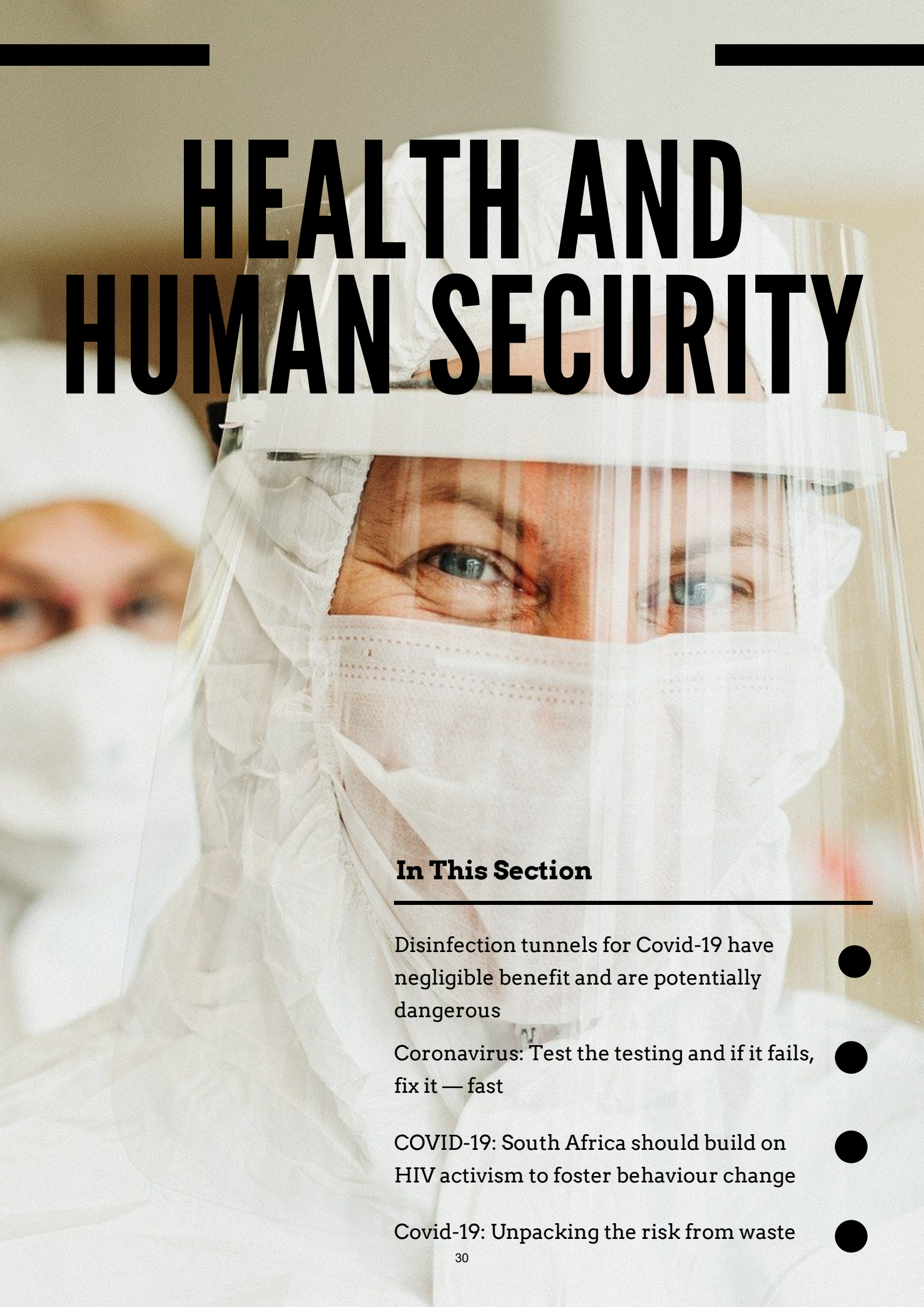
https://www.nicd.ac.za/african-countries-are-moving-to-make-masks-mandatory-key-questions-answered/



HEALTH AND HUMAN SECURITY

In This Section

Disinfection tunnels for Covid-19 have negligible benefit and are potentially dangerous

Having communicated with a number of companies who are marketing and selling these in South Africa, we have yet to get a straight answer regarding what basis they market these products on and what evidence exists on its effectiveness in preventing Covid-19 infection.

The global Covid-19 pandemic (the disease caused by SARS-CoV-2), has taken many countries by surprise. This is the major pandemic of the 21st Century that has now spread globally across geographic and socio-economic divides. The World Health Organisation (WHO) has called for calm, and systematic, measured responses to dealing with Covid-19 at the country level, however, fear and uncertainty persists in most societies.

The key challenge faced by all countries is slowing the rate of transmission of the virus to mitigate the overwhelming of health services. In the absence of vaccines or other therapeutics, the only armament available to us to do so are simple, evidence-based non-pharmaceutical interventions (NPIs). These include hand hygiene, social distancing, and universal masking.

Unfortunately, this is being superseded by fear, stigma and the introduction of practices, which do not have significant effects on preventing virus transmission and may be harmful to the public. One such, is the use of disinfection tunnels.

Often driven by fractured knowledge, mixed messages, profit-driven advertising campaigns based on half-truths, and misinformation on risk perception via social media, commercial companies are capitalising and marketing costly disinfection tunnels at a variety of venues – as well as proposing indiscriminate fumigation of places.

The concept of spraying chemicals arose from vector control programmes, which use extensive spraying of waterways and homes to kill mosquitoes and other vectors during outbreaks of malaria, Zika, yellow fever and Dengue. While mosquitoes were effectively controlled, widespread spraying was stopped because of its detrimental effect on human health and the environment.

Fast forward to 2014 and the Ebola outbreak in West Africa. Led by fear and panic, chlorine spraying of the population, including healthcare workers (HCWs), was widely introduced in affected countries while in others, including South Africa (SA), spraying was part of the country's infection prevention containment strategy, should Ebola be introduced into the country.

During the 18-month outbreak in Sierra Leone, damage to the eyes (58%), skin (52%) and respiratory tract (62%) was reported in HCWs. Clinical symptoms increased proportionately to the number of chlorine spray exposures, irrespective of the fact that HCWs were wearing full personal protective equipment (PPE) during each spray. For example, in two studies from the US, despite every cleaner using PPE, a higher number of clinical respiratory and other symptoms were reported in those who worked with disinfectants compared with those who did not.

A disinfection tunnel is a means of spraying the public as it walks through a cubicle or tunnel with a chemical mist of variable composition, aimed at "disinfecting all exposed areas including hands". It appears that the chemical used, its concentration and side effects are kept a secret.

Having communicated with a number of companies who are marketing and selling these in South Africa, we have yet to get a straight answer regarding what basis they market these products on and what evidence exists on its effectiveness in preventing Covid-19 infection. Trying to get any information from the internet also led to a blank wall because the chemical nature of these compounds or pertinent studies of the effects of these chemicals on the respiratory tract in humans are not available.

The WHO has very recently published its guidance on environmental disinfection and has condemned all outdoor environmental spraying and human spraying in the strongest possible terms. The Pan American Health Organisation (PAHO) has not only condemned the practice but has provided a comprehensive table with side effects of known products used in tunnel sprays for humans.

A campaign to stop human tunnel spraying has published documentation from ministries of health from 12 countries mainly from Latin America, but also India, Malaysia and Philippines where spraying has been stopped.

South Africa has a long history of human rights grounded in legislation to protect its citizens. These include the Hazard Substance Act (1973); Occupational Health and Safety Act (1993) and the National Environmental Management Act (1998) to name but a few. It is therefore surprising that a country like South Africa would allow the spraying and misting of humans in public areas without concrete evidence, especially when knowing the mantra that "Covid-19 spreads via the respiratory tract"– we see this every day on the television and other media.

How then, can citizens of this country be exposed to being sprayed with chemicals without either evaluating the consequences or asking for expert advice on the effect of spraying such chemicals on humans?

Most worrying of all, we have now received reports of a number of South African private schools who are wanting to introduce such tunnels for learners returning to school. One was planning to use quaternary ammonium compounds (QACs), which are high on the WHO's list of dangerous substances. We have, indeed, gone from the sublime to the ridiculous and without

reservation condemn the adoption of such potentially harmful practices.

Let's get back to basics – focus on the central interventions of social distancing, hand hygiene, universal masking, regular decontamination of surfaces at home and at work, and seeking medical advice if becoming symptomatic while self-isolating. We need to spend more time and money on improved messaging, working with hotspot areas to understand why the message is not getting across, listen to the community and its leaders, and use the ever-growing evidence base to inform simple yet robust IPC practices.

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https://www.sun.ac.za/ENGLISH/LISTS/NEWS/DISPFORM.ASPX?ID=7474

Coronavirus: Test the testing and if it fails, fix it — fast

The big issues facing our country are not illegal cigarettes, when we can exercise, or whether we can get warm food at the supermarket. The big issues are how to drive the reproduction rate of the virus below one. One part of the solution is the good practice of hygiene, physical distancing and masking up. The other part is testing, tracing, isolation, and hotspot management.

Shortly after the Berlin wall fell, one of us was asked to meet with the top managers of a Trabant plant. The parking lot was full of trabbies with faults rendering them unfit for market. As far as the factory manager was concerned, they were made to spec. He had achieved the targets that he was set. But they did not fulfil the basic requirement of an automobile. They did not work.

Recently there was a report of a taxi driver in the Western Cape, driving passengers after testing positive for Covid-19. There was, of course, the immediate outrage. The driver was to be charged with attempted murder.

Less conspicuous in the article were the dates. The man was tested on 30 April. But he was only informed of his status on 6 May. Was he under mandatory quarantine? We don't know. The time lag between test and result is a crucial variable in attempts at managing the pandemic.

The Covid virus is believed to be most contagious in the first few days prior to showing symptoms. The days between the test and the result might well have been as problematic as the much later action, the action which has resulted in a charge of attempted murder.

Let's compare this with the process in Wuhan, where timeous testing was the key to the lifting of lockdown. Anecdotally anyone entering or leaving a building was screened for temperature. If they tested positive, they were immediately taken to a dedicated facility and their lungs were CT scanned. In our country, CT scan turnaround times are at best several hours. But by targeting lungs only, Wuhan radiographers, working with radiologists, were able to reduce the process to minutes. A positive CT scan then led to swab testing with the patients waiting for roughly four hours, all the while in quarantine. Positive swab results led to immediate treatment and contact tracing. In Wuhan, contact tracing has reduced new cases to all but zero. This narrative is based on the early February on-site report of Dr Bruce Aylward for the WHO.

The contagiousness of the Covid virus and the now eight-day doubling rate in our country do not allow for test delays of days, let alone a week. Contacts need to be traced before they become symptomatic. In the US, a call has been made to discount tests where the results have taken more than 24 hours to be communicated.

As Bill Gates put it, if the test comes back positive what should the patient do? Send their contacts a letter of apology?

The big issues facing our country are not illegal cigarettes, when we can exercise, or whether we can get warm food at the supermarket. The big issues are how to drive the reproduction rate of the virus below one. One part of the solution is the good practice of hygiene, physical distancing and masking up. The other part is testing, tracing, isolation, and hotspot management. Here the strategy rests fundamentally on rapid results and decisive action.

Over the next few weeks, as the economy opens up, a lot of focus will be on managing potential hotspots. All enclosed spaces where workers spend long periods in close proximity to one another are Petri dishes for the spread of COV-2. The United States shows just how difficult it is to maintain safe production in meat plants.

Potential hotspots include hospitals, care homes, prisons, funerals, food processing and packaging, and retail, our households, and educational facilities. Hospital workers are in the frontline, they must be protected. Care homes must restrict contact as much as possible, ensure spaces are well ventilated and monitor carefully. Prisons are highly problematic, given that they are routinely overcrowded, and often function in states of undeclared warfare. Each place where gatherings occur will need to be subject to a workflow study and scarce government resources will need to be allocated to this. Underlying all of this will be testing, and the testing will need to be fit for purpose.

Like East Germany in the 80s and 90s, South Africa has fallen behind in terms of basic management practices.

We make absurd statements, such as: "We are good at policy, but bad at implementation." There is no reason why it should take us a week to do what the Chinese do in four hours.

To invoke a basic management principle, it is a case of basic "blocking and tackling".

Basically, we need to map the process and identify bottlenecks, handovers, and points of weakness. We need to optimise the repetitive tasks with standard operating practices. We need to quantify the line from start to finish and balance it. We need to identify points of weakness and put in place tools to monitor.

In South Africa, too often, process flows are done for the auditor and not used as a tool to eliminate waste, cut cost, and improve responsiveness. We need to set an initial target of a 24-hour response. Then we need to put in place a continuous improvement mechanism to take it down to "best practice". Finally, we need to make strong decisions regarding laboratories unable to meet the criteria.

When the cars come out of the factory, they need to work. Not almost work. Test the testing, and if it fails, fix it, and fast.

Dr Michael Kahn, Centre for Research on Evaluation, Science and Technology

Dr Michael Gering

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https://www.dailymaverick.co.za/opinionista/2020-05-17-coronavirus-test-the-testing-and-if-it-fails-fix-it-fast/

COVID-19: South Africa should build on HIV activism to foster behaviour change

During a recent run in Newlands Forest, Cape Town, I encountered a few runners and walkers without masks. When I asked one of them where his mask was, he replied:

I am running outdoors and if you don't like it, then stay at home.

As we passed each other I shouted back that it was not about his safety, but the protection of others. I was puzzled by his insistence that wearing a mask or not was simply a matter of individual choice. South Africa's national health department requires cloth masks to be worn in public.

Despite current scientific consensus, why has it been so difficult to convey the message that wearing a mask in public is a sign of care about the health of others? If scientists are correct about the efficacy of masks, then surely refusing to wear one is much like driving drunk – an irresponsible and antisocial act that demonstrates a lack of concern for the consequences of one's actions.

It would seem from other parts of the world, such as the US and Brazil, that the politicisation of masks and social distancing by political leaders has seriously interfered with COVID-19 public health messaging. In South Africa, one of the difficulties in getting some people to wear masks has to do with libertarian arguments that it is up to individuals to decide whether

to follow state and public health recommendations, and anything else would be an infringement on their liberty.

Drawing on my own research on AIDS activism, I argue that a great deal can be learned from the HIV messaging by activists and health professionals during the late 1990s and early 2000s.

Until a COVID-19 vaccine becomes widely available, public health messaging must contribute towards transforming mask wearing, social distancing and washing hands into every day, habitual practice.

One of the key lessons from the AIDS pandemic is that it is not simply a matter of acquiring information about the disease: what is equally important is the capacity to change actual behavioural practices to reduce transmission of HIV.

AIDS activism

The height of the AIDS crisis in South Africa was in the late 1990s and early 2000s. At the time, the civil society group Treatment Action Campaign (TAC) and the medical non-profit Médecins Sans Frontières (MSF) embarked on nationwide treatment literacy campaigns. The organisations wanted to convey the basics of AIDS science and antiretroviral therapy to their rank-and-file members as well as the wider public.

Some of these activists became what the sociologist Steven Epstein refers to as "lay experts". They were able to translate their knowledge and experiences as activists and people living with HIV into forms of expertise and scientific capital that were recognised by scientists and policymakers.

The highly successful "citizen science" campaigns took place at a time when there were hundreds of AIDS-related deaths a day.

But this trust in science and experts did not come easily. In the initial stage of the pandemic, AIDS activists and health professionals had to contend with a range of alternative understandings of AIDS. These included beliefs in witchcraft as well as widespread silence and avoidance of talking about this sexually transmitted life-threatening disease because of fear, taboo, shame, and stigma.

Another major factor to contend with included former President Thabo Mbeki challenging orthodox AIDS science. In order to counter the former President's dissident position, activists and public health professionals had to come up with clear and accessible AIDS science messaging.

In my book, From Revolution to Rights, I show how "AIDS literacy" was disseminated by activists in public spaces and institutions such as railway stations, taxi ranks, shebeens, schools, factories, religious institutions, universities as well as door-to-door campaigns.

It was only because of concerted grassroots campaigns from activists and health professionals that knowledge about AIDS science spread and treatment eventually became available in South Africa's clinics.

Fortunately, it seems that the struggle for AIDS treatment, and the successful dissemination of AIDS literacy throughout South Africa, laid the foundation for relatively widespread citizen trust in science and expertise. This trust in science has also been reinforced because AIDS treatment has managed to extend the lives and improve the health of so many millions of people living with HIV.

What now?

It is now up to government to drive prevention campaigns that can persuade citizens that small measures like wearing masks and social distancing can not only save lives but are also acts of decency and symbolic recognition of the vulnerability of frontline health professionals, essential workers, the elderly and those with comorbidities.

The co-morbidities of HIV, diabetes, hypertension, obesity, and tuberculosis (TB) render millions vulnerable to the novel coronavirus.

By 2018 7.7 million people in South Africa were living with HIV while 301,000 South Africans became ill with TB and 63,000 people died from the disease.

Surely fit and healthy cyclists and runners living safely and securely in the suburbs would wear masks to protect those citizens more at risk than them, including their parents and grandparents?

Perhaps the small act of wearing a mask could come to be seen as a sign of ubuntu (humanity) in action. I am reminded here of Dr Dr Bernard Rieux's conversation with the journalist Rambert in Albert Camus's 1947 novel "The Plague":

There's no question of heroism in all this. It's a matter of common decency. That's an idea that may make people smile, but the only means of fighting a plague is – common decency.

PROF STEVEN ROBINS, SOCIOLOGY & SOCIAL ANTHROPOLOGY

HTTPS://THECONVERSATION.COM/COVID-19-SOUTH-AFRICA-SHOULD-BUILD-ON-HIV-ACTIVISM-TO-FOSTER-BEHAVIOUR-CHANGE-142091

Covid-19: Unpacking the risk from waste

Since the Covid-19 pandemic reached South Africa, many households have experienced changes to their refuse collection schedules. Most of these delays are due to waste depots closing temporarily after cases of Covid-19 occurred among staff.

The work done by waste service employees, as is the case with staff at supermarket tills, is enjoying unaccustomed appreciation during the pandemic. They are now widely acknowledged as essential service providers, doing a physically tough and not well-paid job, which was previously only noticed when the waste bin had not been emptied and people complained.

Are these newly respected essential workers becoming infected through their work? Is handling of household waste an occupational hazard? Are the precautionary measures introduced by municipalities sufficient?

Manageable risk

It has been shown that under laboratory conditions (where many things are quite artificial but can be controlled strictly) the aetiological agent, SARS-CoV-2, can "survive" (a better term would be "remain infectious") for between hours to several days, depending on type of surface, temperature, moisture, presence of UV light, and so on.

Guidelines are in place for the disposal of waste from households where someone is in quarantine (i.e. has been exposed and may be incubating infection, is not sick (yet) but could be infectious a day or two before symptoms start) or in isolation (i.e. is ill and known or suspected to be infected but does not need hospital admission).

Potentially infectious waste such as used masks, gloves, or tissues that have been in contact with a patient should be double bagged and kept for a minimum of five days before being put out with the domestic waste. The reason for the five-day waiting period is that the virus will not "survive" that long; even with no further measures, there will be no infectious virus left.

However, undoubtedly there are currently numerous undiagnosed cases of Covid-19 in affected communities, mostly people who are infected but not ill, or with only mild illness. These households will likely handle their contaminated waste with no special precautions, which means that potentially infectious items end up in the waste bin.

This too should not be much to worry about if those who handle the waste use gloves (not single-use medical latex ones which give a false sense of protection in most scenarios, but robust working gloves that can be washed or cleaned after use), avoid touching their faces, and regularly wash their hands or use alcohol-based hand rub, especially before drinking, eating or smoking.

If municipal workers have been properly trained and equipped with the necessary protective equipment, and because they handle bins and bags rather than the waste itself, their risk of picking up infection from other people's rubbish should be small.

But still, cases of Covid-19 seem to be quite common among municipal solid waste staff. There is one major risk factor that likely explains this – other people, especially colleagues.

Usually, a staff member becomes infected in their community and then inadvertently exposes other staff while working together. This is seen in many occupations, yet the risk of working together with colleagues who unknowingly may be infected, and infectious, is often underestimated. This is true even for medical staff.

When exposed to infectious patients, they wear appropriate personal protective equipment (PPE), but during breaks or on the way to and from work, they interact with colleagues at close quarters and without precautions and may become exposed. I have not seen any studies but would imagine that the same is true for municipal waste workers – it is not the actual work that poses a risk, but the workplace which brings with it close and prolonged contact with co-workers.

What about waste pickers?

So, what about informal waste handlers? This largely unsupported informal industry provides an income to hundreds of thousands of people and accounts for most of South Africa's recycling – often recycling for the better-off who do not bother to recycle their waste.

Even though informal waste pickers usually have closer contact to waste items than staff who empty bins, there is probably not too much to worry about recyclables (PET or glass bottles, tins, paper, and so on). Even if someone, for example, coughed into their hand and did not wash it before disposing of a food or drinks container, it is unlikely that the virus would remain infectious for long on the container.

Used tissues and masks may be an issue, though. If there is quite a large amount of secretions containing a lot of virus, the "dirt" may shield the virus and allow it to remain infectious for longer.

Sadly, the sorry state of this neglected sector of the economy means that informal waste handlers will usually not have access to protective equipment, gloves, and hand sanitisers, nor the necessary training to use them even if they had them (when used inappropriately, gloves can make matters worse rather than safer).

So those going through household waste in search of recyclables are at risk in places where there is rampant community transmission, like currently here in Cape Town.

What can we do?

There would be no problem if those who generate the waste were considerate enough to separate their recyclables into clear bags and put them on top of the bin. This would spare waste pickers from having to forage through the contaminated mixed rubbish in search of recyclables.

It does not take a pandemic to realise that subjecting others to go through one's rubbish is degrading and potentially dangerous. What about tuberculosis? HIV? Antibiotic-resistant pathogenic bacteria?

And no, this is not their choice, but their only way of making a living – which all will agree is much preferable to not earning an income or turning to crime. It is overdue that this sector gets more recognition and support. Covid-19 could serve as a wake-up call, but so far there is little evidence for that here in South Africa.

The pandemic and the various levels of lockdown it necessitated have had some positive, albeit temporary, environmental side effects. Yet it has also, the world over, led to people generating more waste because they were at home, cleaning out and eating in, but also because of those add-ons like masks and sanitising wipes and gloves. Recycling systems in many countries have stalled.

The amount of waste most people generate was unsustainable to start with and must not be allowed to get even worse. The United Nations Environment Programme (UNEP) describes waste management as an essential public service in the fight against the pandemic and has published a number of useful fact sheets.

Widespread concerns about hygiene have been seized upon by the plastics industry which had seen its fortunes starting to change. Under the pretext of protecting from infection, unjustified bans on reusable shopping bags, coffee cups and other items have been implemented.

Such bans are largely unnecessary; no one should let themselves be fooled into thinking that going back to disposables will protect them from Covid-19.

Putting one's recyclables out separately for waste pickers, and if possible, composting one's own biodegradable (kitchen and garden) waste, are great and quite simple steps to start with. My municipal bin does not smell, as it does not contain biodegradable waste which goes onto the compost heap, and it is 4/5 empty, as bulky recyclables are also not in there. I only put it out for collection once a month, but still pay the same as people who put out overflowing bins every week.

As in so many spheres, the pandemic has revealed pre-existing problems without pardon. "Forcing" people to sift through one's rubbish has been and remains inhumane. Throwing away large amounts of mixed rubbish to fester in landfills and generate methane – a greenhouse gas many times more potent than carbon dioxide – is unsustainable and wasteful.

Like many, I also complain about inconsiderate bin pickers leaving behind a mess – but the ultimate culprits are those of us who are too ignorant or simply too lazy to help them with a little extra effort so that they can go about their business in a dignified way.

Let us make this one of the good things to come from the pandemic.

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https://www.sun.ac.za/english/Lists/news/DispForm.aspx?ID=7499

Covid-19 shows us yet again: Don't mess with Mother Nature

Rushed research in the time of pandemic panic has led to questionable research and conspiracy theories about the origin of the virus – but genetic analysis of the virus has shown that it is highly unlikely that it originated in a lab, writes Kristien Nel van Zyl, Wolfgang Preiser, Andrew Whitelaw and Susan Engelbrecht in an opinion piece for Daily Maverick.

With the entry of SARS-CoV-2 – the virus responsible for Covid-19 – into the human population and the rapid spread of the pandemic, the general public as well as the medical and broader scientific communities have been bombarded by an extraordinary number of articles in scientific journals and on pre-publication servers, as well as in popular media, including social media. This has led to a change in publication norms, with expedited publications reaching the public within days of receipt and preprint servers being close to overwhelmed.

While this has allowed for worldwide dissemination and research efficiency on an unprecedented scale, it is no surprise that some questionable research has slipped through. As shown in the past, a single "bad" paper can overshadow many more legitimate ones. To combat this, many preprint servers and publishers now have filters – but is it too little, too late?

Many conspiracy theories regarding the origins of SARS-CoV-2 have taken hold, partly due to the propagation of these theories by respected professionals in both the scientific and medical fields.

We are aiming with this article to debunk some common misconceptions and misrepresentation by summarising peer-reviewed, credible research showing that this novel virus has a "natural" origin and the unfortunate ability to spread further and faster than previous coronaviruses.

Manufacture

A major contributor to the manufacture theory was the presence of supposedly "unnatural" DNA sequences in the novel coronavirus genome. This theory first came about in a preprint in January 2020, where the authors claimed to have found striking similarities between the novel virus's spike glycoprotein and two HIV proteins, gp120 and Gag. The research was retracted less than a week later, due to the input and comments from peers that pointed out that the methods used were rushed and incomplete, and that the conclusions drawn were, at best, coincidence.

Furthermore, a comment published less than a week later thoroughly debunked every conclusion drawn by the preprint by showing how the original bioinformatics analysis was flawed.

Despite the retraction, and the evidence against the link to HIV, this question was thrown into the spotlight again by French Nobel Prize winner, Luc Montagnier, in an interview in April 2020. Claims were made that the virus was created during HIV vaccine research in Wuhan. Some people, including some scientists, used these claims to support the theory that an artificial coronavirus escaped from the Wuhan laboratory, either accidentally or by purposeful release. However, if this were the true source of SARS-CoV-2, evidence would have been found in the viral genome, since several reverse-genetic systems are already available and commonly used for betacoronaviruses, such as SARS-CoV-2. No such evidence has been found by any of the teams that conducted whole genome sequencing on various samples from the outbreak.

Another theory suggests the escape of a "natural" laboratory virus. On the face of it this may seem plausible, especially given past incidences of SARS-CoV viruses that escaped from laboratories that work with virus culture. There have been incidents of SARS-CoV-1 infection occurring in laboratories: in Singapore, in Taiwan, and two cases in China, leading to three generations of infections due to human-to-human transmission outside the laboratory. All three incidents involved SARS-CoV-1 strains from samples being used in these laboratories.

A second point brought up by some in the medical profession is that the novel virus must be human-made, as it should not be spreading so rapidly across the world. "Human" coronaviruses HCoV-OC43, HCoV-229E, HCoV-HKU1 and HCoV-NL63 are indeed seasonal. They have circulated in human populations for at least decades, if not centuries, and may have

originated from an animal source originally. (Interestingly, HCoV-HKU1 and HCoV-NL63, despite having been present for decades, were discovered only after 2003 due to much increased research interest in human coronaviruses).

While the current Covid-19 outbreak began and spread during the northern hemisphere winter months, it has continued to spread during the northern hemisphere spring and summer and also in warm climatic zones such as Brazil. While virus stability may be impaired by higher temperatures, the infection pressure during an outbreak and the fully susceptible population are likely to overcome this impediment.

This is supported by previous coronavirus outbreaks. Severe acute respiratory syndrome (SARS) started in winter and persisted into summer. Middle East respiratory syndrome (MERS) was brought to Korea via a single traveller in May 2015 and caused an outbreak during warmer months.

Last, many researchers and clinicians fear that this novel virus spreads too rapidly to be a natural coronavirus. While it is indeed spreading faster than SARS-CoV and MERS-CoV, possible reasons have been found in its ribonucleic acid (RNA). SARS-CoV-2 has distinct mutations in its spike protein, specifically the receptor binding domain (RBD).

The RBD gene is the most variable part of the coronavirus genome and mutations here can affect how well the virus can enter cells. Some argue that this is a reason to believe it was purposefully inserted; however, the backbone sequence of the virus does not support the genetic manipulation theory. Other mutations in this region give more credit to zoonotic transfer events, as will be explained next.

Mother Nature

In a sense, the occurrence of this pandemic had been forewarned by the scientific community. Highlighted here are just four of many articles that were written before the discovery of SARS-CoV-2: in September 2019, January 2019 and October 2007, and strikingly, a report written in the wake of the SARS epidemic in 2003. All suggest that future coronavirus outbreaks are likely to originate from bats or exotic animals, specifically in China. The picture painted by literature since the start of the pandemic shows how these predictions have come true.

Comparisons of the genomes of the novel coronavirus SARS-CoV-2 with SARS-CoV, MERS-CoV and a large assortment of other coronaviruses, including many SARS-like coronaviruses found in bats, have been made in multiple publications by unrelated author groups. Genetic comparison found that the novel virus is less closely related to MERS-CoV (~50%) than to SARS-CoV (~79%). Phylogenetic analysis placed SARS-CoV-2 in the genus *Betacoronavirus*, subgenus *Sarbecovirus* and showed that it formed a distinct clade within the species *Severe acute respiratory syndrome-related coronavirus*; it was subsequently named SARS-CoV-2 following established naming practices.

Evolutionary analysis in early 2020 found that the closest relative of SARS-CoV-2 was a previously isolated bat coronavirus (RaTG13) from China (96% sequence homology). More recently, another coronavirus (RmYN02) isolated from bats that were collected in China in 2019 was shown to share 97% identity in the lab gene. While it is not the exact variant that caused the outbreak, it shows that the progenitor of SARS-CoV-2 probably originated in bats. Transfer events such as these have been shown before.

The major differences between SARS-CoV-2 and other SARS-like viruses were seen in the spike protein, where the previously mentioned mutations were found. Of six key residues in the receptor binding domain, five were different in SARS-CoV-2 when compared to SARS-CoV-1. Interestingly, these six residues are identical to those found in a pangolin coronavirus.

The second set of mutations was the insertion of amino acids between the two subunits of the spike protein. Previous research suggests that this would allow bat viruses to infect human cells. The closely related bat-derived coronavirus, RmYN02, also has amino acid inserts between the spike protein subunits, providing

strong evidence that these events often occur naturally. These discoveries further discredit the idea that mutations in the SARS-CoV-2 genome were introduced in a laboratory and led to an unusual question: were pangolins the intermediate host for SARS-CoV-2?

At first, this may sound like a far-fetched theory; however, scientific evidence suggests it may be possible. Malayan pangolins illegally imported into China were found to contain coronaviruses up to 91% similar to SARS-CoV. Human-pangolin contact could have arisen by many means, as pangolin meat is considered a delicacy and the scales have been reportedly used in Chinese traditional medicine.

This, together with the discovery of the six key mutation changes in the RBD receptor supports the possibility of pangolins as the intermediate animal host. More important, even without considering pangolins as an intermediate host, this proves that the mutations found in SARS-CoV-2 could occur naturally.

There is still the issue of exactly how and where the virus transferred between animals and humans. Unfortunately, the likely period of undetected human-to-human transmission and the lack of animal and environmental samples at the proposed origin site in Wuhan make this a difficult task that is expected to remain unsolved.

While the manufacture theory deserved investigation, genetic analysis of the virus has shown that this is highly unlikely. Scientific evidence supports the Mother Nature theory, namely that SARS-CoV-2 most likely originated through zoonotic means either by direct contact, e.g. of bats with humans, or via an intermediate host. This was likely followed by a period of undetected human-to-human transmission, during which the virus could mutate and spread rapidly enough to trigger detection by medical authorities once a number of cases of severe disease arose.

Given the growing evidence showing that a significant proportion of people infected with SARS-CoV-2 remain asymptomatic, it is entirely plausible that there was a period of sustained, undetected human transmission following the first zoonotic transfer.

With such a large reservoir of animals untested, we may never find the true progenitor of SARS-CoV-2. However, the mutations it contains, and their similarities to those found in animal coronaviruses, such as bats and pangolins, certainly show that it is possible for the virus to adapt by natural selection to infect any species.

Given that this has been known since 2003, yet a spill-over was allowed to happen again (this time, with much worse consequences), one might just wonder whether humankind is clever enough to learn the lesson this time. Mother Nature will always find a way, particularly if humans choose to interact irresponsibly with the rest of the natural world.

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HTTPS://WWW.DAILYMAVERICK.CO.ZA/ARTICLE/2020-08-04-COVID-19-SHOWS-US-YET-AGAIN-DONT-MESS-WITH-MOTHER-NATURE/

EDUCATION

In This Section

COVID-19: Who should go back to school first?

As South Africa considers reopening schools amid the COVID-19 crisis, a policy brief authored by Dr Nic Spaull of the Department of Economics at Stellenbosch University (SU) argues that by allowing the youngest children to go back first teachers and parents will be at lower risk. The brief is consistent with epidemiological evidence from around the world.

The Department of Basic Education plans to open schools from 1 June 2020, starting with Grade 7 and Grade 12 pupils.

Spaull argues that at the same time that Grade 12 goes back, Grades R, 1, 2 and 3 should be allowed to return, rather than Grade 7s, using a phased-in approach with special precautions for teachers.

"Children aged 0-10 years old are considerably less likely than adults to get infected, either from each other or from adults. They are less likely to transmit the virus, even when they are infected and it is extremely rare for them to get severely ill or die from COVID-19," says Spaull.

He says this should be combined with close monitoring of infection rates among a random sample of teachers and families of Grade R-3 children. Such an approach would minimize the risk to learners and teachers and also allows many parents to go back to work.

Social and economic advantages
He said in addition to the fact that children 10 years and younger are considerably less likely to get infected, they also present the highest child-care burden to their households and prevents many parents and caregivers from going back to work and earning an income to support their families. Any response to mitigate the economic disaster from the lockdown and COVID-19 must take account of parents' additional child-care responsibilities while schools are closed.

Secondly, young children are also the least able to follow self-directed learning at home. This is partly because they have not yet learnt to read by themselves, but also because young children simply require higher levels of human interaction and "activity" for them to learn. For most children in South Africa all curricular learning has stopped while schools are closed leading to further inequalities in learning outcomes.

Lastly children's wellbeing increases when they can go to school. Children receive free school meals to supplement their diet, they can interact with their same-age peers, and it gives their caregivers a break from otherwise constant child-care. This improves parents' mental health and allows them to work, plan and relax, making them better caregivers when children come back from school. Young children being "locked-up" at home when there are few health benefits to themselves or society is bad for the well-being children, bad for parents and bad for the economy.

Evidence-based
Evidence emerging from countries around the world supports Spaull's policy brief that children are less likely to catch COVID-19 and almost never die from it.

According to figures released by *OurWorldinData.org*, the fatality rates from COVID-19 by age group for China, Italy, Spain and South Korea show a "0%" fatality rate for the 0-9 year-old category and 0.3% for those less than 40 years of age.

"Research emerging across all countries seems to be highly consistent. In brief, children are less likely to get infected, either from each other or from adults, and they are less likely to transmit even where they are infected," says Spaull.

International research studies
Research facilitator Munro (2020) reports that there have been five studies (from Shenzen, Japan, Guangzhou, Wuhan and Hunan) looking specifically at whether children catch the disease at the same rate as adults after they are exposed to a confirmed positive case.

"In conclusion, we have five studies assessing the secondary attack rate of COVID-19 across age groups, in which four report a considerably lower attack rate in children and one which reports the same in children as the general population. It appears fairly convincing that children are less likely to acquire the infection than adults, by a significant amount," recounts Munro.

The South African experience
"While South Africa has a considerably smaller number of infections and fatalities compared to any of the countries reviewed above, the age-profile of infections and deaths is consistent with the international experience," says Spaull.

As of 2 May 2020, 123 people had died of COVID-19 in South Africa but none of these deaths were among those under 20 years of age (NICD, 2020). Of the 3 144 positive cases of COVID-19 in South Africa as at 19 April 2020, only 0,3% were aged 0-10 and 4% were aged 11-20.

Do school closures help?
In a widely cited study published in the *Lancet Journal of Child and Adolescent Health*, Viner et al (2020) conducted a review on the effectiveness of school closures in limiting the spread of COVID-19. They concluded as follows: "Data from the SARS outbreak in mainland China, Hong Kong, and Singapore suggest that school closures did not contribute to the control of the epidemic… Recent modelling studies of COVID-19

predict that school closures alone would prevent only 2–4% of deaths, much less than other social distancing interventions."

In another article, published in *Science* and also modeling the impacts of different interventions to limit the spread of COVID-19, Zhang et al (2020) use contact surveys of 136 confirmed index cases infected in Wuhan and Shanghai. They conclude that "social distancing alone, as implemented in China during the outbreak, is sufficient to control COVID-19". Yet they also argue that school closures can help to flatten the curve: "While proactive school closures cannot interrupt transmission on their own, they can reduce peak incidence by 40-60% and delay the epidemic."

"If it is true that children are less likely to transmit the virus when infected, which seems likely given the above findings from the literature then the assumptions underlying the school closure analysis are incorrect and over-estimate the gains from school closures," says Spaull.

Are children continuing to learn during lockdown?

"Given what we know about learning losses during holiday periods, the lack of access to technology and educational materials at home for the poorest 70% of South African children, and the lack of preparation for distance-learning before the lockdown started, the short answer to this question is no.

"If one is realistic, for the poorest 80% of learners in South Africa there is virtually no curricular learning that is taking place during lockdown.

"Given the practical impossibility of continuing with meaningful learning from home – at least for the poorest 80% of learners, the emphasis for the Department of Basic Education should be making schools safe for learners and teachers to return."

Dr Nic Spaull of the Department of Economics at Stellenbosch University

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HTTPS://WWW.SUN.AC.ZA/ENGLISH/LISTS/NEWS/DISPFORM.ASPX?ID=7343

We all need to get behind Angie Motshekga to ensure schools can reopen safely and efficiently

There was always certainty that schools would reopen. It was just as important to save the school year as it was to ensure that the reopening of schools would not spread Covid-19 further. Minister of Basic Education Angie Motshekga gave a strong performance as she addressed the issue.

What a powerful performance by Angie Motshekga. I have not recently, if ever, seen the Minister of Basic Education speak so definitively, so clearly and with such conviction. After 20 minutes it was over. But not before she had condemned the vandalism at 1,577 schools.

Vandalism of the schools is the reason only a limited quantity of sanitiser was delivered to schools during the past week. It was intended for the principals and their management teams. Given the large-scale vandalism, it would be irresponsible to deliver large amounts to schools, Motshekga explained.

The minister made it clear that she and her department have consulted widely. All unions, school governing body representatives and the Cabinet were consulted before the National Command Council approved the decision to reopen schools. There is thus no legitimacy crisis. But experience tells me that the last word has not yet been written about this.

Comorbidities

It is a fact that some learners (and teachers) have underlying diseases (like asthma, heart disease, hypertension or diabetes), the so-called comorbidities. Therefore, it is important that parents inform the school timeously if a learner has an underlying disease so that suitable steps can be taken. During question time, the minister explained that a principle that is accepted worldwide is that you cannot keep all the schools in a country closed because a few learners suffer from asthma. The education project must go ahead, especially since the virus will still be with us for at least another three years.

Scientific basis

Responding to a question about what the scientific basis for the decision was, the minister emphasised that these are uncharted waters, and that her department has relied heavily on the expertise of the medical advisory council of the Department of Health. She quoted from Unicef's framework for reopening of schools to motivate the decision. According to the framework, breaks in tuition time can have a devastating effect on a child's ability to learn. The longer a child is out of school, the lower the chance that the child will return.

"We learned this from the 2010 strike. Many of our learners never returned," Motshekga said.

According to Unicef, children from poor households are five times more likely not to complete primary school than children from affluent homes. To keep schools closed for too long increases the chances of teen pregnancy, sexual exploitation, violence and child

marriages. “Children are children. While we are talking here, they are playing outside,” she added.

Something the minister did not mention, but which was pointed out to me by researchers at the University of Stellenbosch today, is the indication that to date 16 people have died in the age group 0–40 out of a population of 40 million. In the group 0-20 so far there have been no fatalities. In addition, South Africa has a relatively young population with an average age of 27, which is an important consideration because younger people have a stronger resistance, according to the report.

Food and water

The DBE has reached agreement with the Department of Human Settlements and Sanitation according to which water must be provided timeously where required. This is important for regular handwashing. This week, images were shown on TV of broken water tanks which had also been incorrectly installed. The DBE can do better.

Motshekga also mentioned that the school feeding scheme had been adapted for the phased return to schools. From 1 June the feeding scheme will be available to all grade 7 and 12 learners. Suppliers will be supplied with the necessary personal protection equipment (PPEs) like gloves and masks. The feeding scheme will relieve the need at schools and should ease the pressure on the supply of food parcels and the dangers that accompany the process.

Curriculum

The question remains, however, whether the curriculum can be delivered successfully, especially as far as matrics are concerned. The minister made it clear that exam papers for matrics have already been set. The matric curriculum will thus not be watered down or “trimmed”. For the other grades, reduction of the curriculum is apparently indeed a reality. Exactly how, will become clear in the next few weeks. The adjusted school calendar will be published in the Government Gazette soon, with the new dates and holidays. Where the final examination was written in October and November in the past, it is clear that schools will close much later (I predict 15 December) and that next year will also be affected (read schools will open earlier to catch up on lost time).

Social distancing

Although it was not referred to by name, it is clear that overcrowded classes will be a huge challenge regarding maintaining social distancing, for which the minister does not yet have the full answer. This is the reason for the phased approach to reopening. To quote the minister: When the Grade 12 learners return, they will have the whole school to themselves, and the same goes for the Grade 7s in primary schools. What is not clear is what happens when all the other grades return. There will be a large-scale hunt for alternative accommodation in church and community halls. Special schools will have a different approach because their classes are much smaller.

How can parents help?

The coronavirus has forced South Africa to think anew about education. Various aspects of our education system will have to change fundamentally. One aspect which must be especially addressed, is whose responsibility education is. An old African saying, “it takes a whole village to raise a child”, was never as true as now. We can no longer sit with our hands folded and wait for the minister. This goes for teachers’ unions, parents and the broader community. Parents have ducked their responsibility for too long, especially in the poorer schools. Poverty is no longer an excuse. Your principal contribution is that which you can do for the school in your neighbourhood because the learners are the children of us all.

Among the tasks which are now needed, is the deep cleaning of the school. This is one aspect with which unemployed dads can help. Maybe it becomes a permanent post. Volunteers can also help with the screening of learners as teachers will have their hands very full. There are many aunties on the Cape Flats making Cape Minstrel outfits. Why not also make masks? Just think what an exciting unifying action it can be if everyone is “masked” in the school colours?

Not everyone supports the minister’s plans. Some experienced educators with whom I have spoken are sceptical, especially because the education department does not have a good record of service delivery. The minister was a bit irritated by a remark about this during question time.

“Mistakes can be fixed and is it so wrong to admit your mistakes and make an honest effort to do better?” she hit back.

In closing, across the world it is clear that countries which have had significant success in containing the virus did three things right: they communicated clearly; they consulted with all role players; and leaders could rely on 100% support from their citizens. So far Angie Motshekga ticks two of the three boxes. The third one is in our hands, the citizens of the country.

It is now our turn to do our part. Let us work together in the belief that a safe, educated and united South Africa awaits us.

But know this also: the country is holding its breath.

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HTTPS://WWW.DAILYMAVERICK.CO.ZA/OPINIONISTA/2020-05-21-WE-ALL-NEED-TO-GET-BEHIND-ANGIE-MOTSHEKGA-TO-ENSURE-SCHOOLS-CAN-REOPEN-SAFELY-AND-EFFICIENTLY/

Teachers courageously confront challenge of teaching during COVID-19 pandemic

The “new normal" in schools during the Covid-19 pandemic raises many challenges for teachers. They have misgivings about the rush to open schools in circumstances where sanitation, deep cleaning and physical distancing are difficult to guarantee. They are especially nervous about infection spikes among those teachers with immunocompromised health profiles. Yet, they are also anxious and eager to figure how best to deliver the curriculum to their learners.

In our capacity as education academics, we have been involved in ongoing processes to support teachers and curriculum advisers to adapt their curricula and teaching to address the Covid-19 circumstances. Our interaction with them has shown that many teachers are going the extra mile to adjust their teaching under these constrained conditions.

Teachers cautioned about an online learning approach to curriculum. They felt that such an approach favours learning in middle-class schools which seemed seamlessly to move their syllabi online.

The problems associated with online learning are amplified in more marginalised schools. The teachers we work with in these schools report having to attend to rising challenges in health, hunger and psychosocial conditions among their learners. Understandably, the teachers' caring practices have become a significant part of their professional commitment during these pandemic times.

They are struggling to focus on the delivery of the curriculum in a context where the government has insisted on “rescuing the school year". Nonetheless, they are devoting attention to adjusting their teaching.

The reality and limitations of online learning

Under lockdown, delivering the curriculum online – more accurately referred to as emergency remote learning – has become the default teaching mode. Governments, educational managers and IT companies have strongly punted online learning.

While online learning has been posited as an effective way to cover the curriculum, the approach is questionable. Teachers tend to base their online teaching on transfer-type instruction, which leads to surface rote learning. The curriculum is being stripped down to bare-bones content, while feedback and assessment are challenging. Our conversations with various groups of teachers in working-class schools via the Teams and Zoom platforms have raised concern about online learning and the call for self-directed learning.

Teachers report exhaustion as they struggle to keep up with the need for continuous online interaction with their learners and parents. They are anxious about whether the work their learners cover at home is sufficient and appropriate.

The dominant complaint about online teaching is its perpetuation of educational inequality, which is particularly pertinent in South Africa with its enormous gap between rich and poor. The teachers reminded me that only 15% of households have adequate computer devices and the internet connectivity necessary for accessing online content. While middle-class schools have been frantically busy teaching their learners via online platforms, accounts from other teachers indicate that their experiences of teaching online have been very uneven.

Working-class schools are attempting to teach via online platforms. But online learning in these schools is extremely difficult because of the lack of devices and connectivity. An example of this became evident in our work with teachers in a primary school. We helped the school to package learning resources such as worksheets and reading texts into shareable online content. We worked with the teachers to share these resources via WhatsApp, which is the only technology widely available among working-class parents.

As they developed more experience with multi-modal teaching and learning, the teachers developed a rationale and a set of techniques for engaging their learners in curricular learning that is based on teaching during classroom time in school.

While the parents received and opened the WhatsApp messages, the teachers quickly realised that parents did not have the necessary data to download the resources. The teachers then settled on a fall-back position of printing the materials and asking parents to collect them at school. In some instances, the teachers were able to explain to the parents how to use these materials to aid their children's learning.

Teachers have begun to develop a teaching approach based on the interactive use of classroom teaching time, WhatsApp messaging, WhatsApp chat time, limited use of online platforms, material shared via flash disks, and the production of printed material.

What has emerged is a combination of contact teaching, the use of online platforms and shareable teaching content that enables teachers in working-class communities to effectively keep on teaching. Teachers are working out how to use these different formats in the context of reduced classroom teaching time and where learning at home has become crucial.

Teacher-directed multimodal learning

What remains central to these teachers' work during the pandemic is the recognition that the multiple modes of teaching and learning are there to support the teachers and sustain their central relationship with learners. The teachers are adamant that classroom contact time needs to remain the cornerstone of learning. Teachers and the social learning that occurs in classrooms cannot be replaced by digital connections.

Teachers were perplexed when some department officials presented the notion of "self-regulated student learning" as the mainstay of learning in the current context. They refused to accept a view of teaching that implied that learners would be individually and personally responsible for their own learning at home and via online interactions.

As they developed more experience with multi-modal teaching and learning, the teachers developed a rationale and a set of techniques for engaging their learners in curricular learning that is based on teaching during classroom time in school.

Teachers regard contact teaching time as essential for presenting and explaining new content and concepts, and for providing clear instructions to learners to guide their learning at home. It also provides and nurtures social connections among learners in their interactions with others, which can also be built on using digital modalities.

The teachers view learning at home as an opportunity for learners to reinforce and deepen their understanding of curriculum content. The teachers are not only preparing expository notes to guide learners at home, but also provide explicit instructions and learning texts to guide learners' engagement with the material. These texts are sent to learners via WhatsApp, or hard copies are given to those who cannot access them online.

With contact teaching time reduced, the teachers are also considering ways of organising how learning should take place at home. A big challenge is to ensure that learners adopt routines during the day for doing their school work.

Our conversations with the teachers generated an approach to managing the learners' time on the days when they learn from home, such as experimenting with providing set time-slots for specific subjects. The learners are being encouraged to work on subjects during set times. The teachers are making themselves available for consultation at set times via WhatsApp chat groups for them and their class. This leads to very productive interactions between the teacher and the class group.

Teachers are motivating learners to develop the discipline and commitment necessary for effective home-based learning. They are giving them tips for learning and self-study, and for managing their home circumstances to enhance self-study. They are persuading their learners to set themselves learning goals, a crucial tactic for remaining on course. Assessment of content acquisition during home learning takes place back in the classroom under the direction of the teacher. Some teachers indicated that their current interaction with their learners has actually increased, in itself a positive outcome, while others are concerned about the large number of learners who do not or cannot participate.

The teachers are soliciting WhatsApp messages from their learners about content and providing answers, explanations and guidance for working through the learning materials. They reported that they get rapid feedback from their learners about how they are grappling with their learning, which in turn allows the teachers to use the classroom contact time for addressing learning gaps and faulty understanding before moving on to introduce new content.

Teachers have also encouraged their learners to set up their WhatsApp chat groups to support each other in peer communication and support.

In sum, a pedagogy of care has taken centre stage among the teachers with whom we are working. Teachers are courageously confronting the challenge of teaching under pandemic conditions. They are developing multi-modal ways of teaching under these new circumstances in which the fear of becoming infected has forced them to adapt their teaching arrangements in often profoundly compromised situations.

These are precarious times. Keeping themselves and their learners safe remains central to teachers' work. Their teaching adaptations are motivated by the need to address what would amount to a considerable loss of learning among their already disadvantaged learners, if learning were to stop for long periods. Many teachers have been nothing short of heroic during these pandemic times.

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HTTP://WWW.SUN.AC.ZA/ENGLISH/LISTS/NEWS/DISPFORM.ASPX?ID=7452

What does the future hold for universities post-COVID-19?

What does the future hold for universities post-COVID-19? This is an all-consuming topic in higher education at present. The coronavirus pandemic has plunged the sector into turmoil, forcing universities to re-examine their current situation and future plans.

Challenges

On the one hand, universities' income is under severe pressure. This is true for all five income streams – state subsidies, student fees, research contracts, philanthropic donations and commercial income. The declining economy has seen purse strings being tightened across the board.

On the other, the higher education model itself is changing. Lockdown restrictions on physical contact and large gatherings forced universities to temporarily suspend face-to-face tuition and switch to emergency remote teaching, learning and assessment. And while there have been some challenges, the transition to the new teaching mode has generally been so successful that it is bound to have a lasting effect on what we offer to whom, and how.

Positives

Of course, there are positives to each of these challenges. In terms of income, financial pressures mean that universities will have to become leaner, more resourceful, less complacent and less wasteful. They will have to generate more funds on their own and put their assets to better use.

The greater use of information and communications technology (ICT) in learning and teaching, in turn, is set to both broaden and deepen education, not only through fully online learning, but also blended and hybrid modes, which combine the best of both worlds.

From the outside looking in, observers might find it baffling that universities are concerned about their future despite a rising demand for higher education. Obtaining a university qualification is still regarded as a pathway to success, a way out of poverty, and a means of securing a better life for individuals and their families. Society also needs graduates to contribute to socioeconomic development and solve people's everyday challenges.

Changes

Indeed, all of this is true. Yet times are changing; in fact, they *have* changed, overnight.

Many people have lost their jobs or have had to take salary cuts. With less money available to fund studies, more young people are contemplating first getting a job and studying part-time.

Others might have gained a university qualification years ago and have been in the job market for some time, but are now forced to re-skill in light of changing circumstances. They might want to pursue new avenues and are again looking to a university to help them do so, but cannot afford to return to full-time on-campus learning.

Moreover, all students – no matter their age – increasingly navigate a digital world, where both content delivery and interaction with others occur online. They can access knowledge and, to some extent, build networks in cyberspace.

Other disrupters in the higher education landscape have been the introduction of massive open online courses (MOOCs) – although they have not quite delivered on their hyped promise – as well as a steady increase in the number of private higher education institutions.

Pending disruption

This has led to warnings that higher education is bound to experience the same kind of disruption as that caused in the taxi industry by Uber, and in the hotel industry by Airbnb. In a recent interview with *New York Magazine*, Scott Galloway, described as “a Silicon Valley runaway who has founded his own virtual classroom start-up", predicted that the “post-pandemic future will entail partnerships between the largest tech companies in the world and elite universities".

This, Galloway said, would allow the parties to “expand enrolment dramatically by offering hybrid online-offline degrees, the affordability and value of which will seismically alter the landscape of higher education".

Prospects

So, what are the prospects for universities? To start with, we have to ensure that we fully optimise our core business – delivering well-qualified graduates, producing

relevant research, and having a positive impact on society. Yet that does not mean we can be complacent and carry on with business as usual. Nor does it mean we must throw the baby out with the bathwater.

As Clayton Christensen and Henry Eyring argued in *The Innovative University* back in 2011 already, universities "must become much more affordable, particularly by embracing online learning technology. At the same time, though, they should make the most of their full-time professors and physical campuses, which might be misperceived as a competitive liability in a world of technological disruption. In fact, the university's professors and face-to-face meeting spaces, while expensive, are unique and potentially invaluable."

Outside the classroom

This was echoed in recent discussions at Stellenbosch University's mid-year executive planning forum. My counterpart at Wits, Prof Adam Habib, was one of the panellists who joined us online for a session on the post-COVID university. He rightly pointed out that a fair degree of the value of a university education was derived from what happened *outside* the classroom, equipping students with "soft skills" through interaction with academics and fellow students, and helping them build networks for life.

Even though these elements are not easily replicable online, the participants in our forum agreed that we would have to start incorporating something similar in our e-learning offerings. As pointed out by one of the other panellists, Prof Agnes Binagwaho, Vice-Chancellor of the University of Global Health Equity in Rwanda, building "communities of practice" online is feasible, as internet connectivity has broadened, and not diminished, opportunities for interaction.

Digital divide

Of course, that is on the assumption that one has (fast enough) internet connectivity. The digital divide continues to exclude many people and was one of the challenges South African universities had to grapple with as we pivoted online at the start of the COVID-19 crisis. We were all committed not to leave a single student behind, but a lack of devices and data stood in the way of this goal being met uniformly across all institutions. So, this issue will require attention for online learning to live up to its promise of broadening access.

Africa

Viewing it from a continental perspective, we do not have much choice. According to the United Nations, Africa already has the world's youngest population (with a median age of 18), and approximately two thirds of the predicted population growth over the next three decades is expected to occur on our continent. Clearly, the demand for education will be enormous, but – as our Chief Operating Officer, Prof Stan du Plessis, put it – there is "no possibility" of meeting this need via the traditional route of brick-and-mortar universities.

The case for e-learning

While online education does not offer a cheaper alternative to face-to-face teaching, as technology costs are an add-on, it does offer scalability. The fact that one is able to serve many more students brings down the unit cost, which makes it more efficient and affordable. And that is the strongest case for universities in South Africa and elsewhere on our continent to expand our e-learning offering (including fully online, blended and hybrid modes) so that we can dramatically increase our developmental impact where it is needed most.

Collaboration

As always, however, quality is as important as quantity. We have to get the basics right, which is complicated by the fact that we are working with new mediums and modalities. This is why collaboration is key. We can achieve more if we work together and learn from one another.

Think big

There is no question that we face immense challenges in higher education. Confronting them will require an equally immense effort. It is best that we take our cue from Daniel Burnham, the American architect who helped rebuild Chicago after the great fire of 1871. He famously said: "Make no little plans; they have no magic to stir [the] blood."

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HTTP://WWW.SUN.AC.ZA/ENGLISH/LISTS/NEWS/DISPFORM.ASPX?ID=7635

Online learning during lockdown helps us find ways to teach differently abled students

For too long, we have been teaching and assessing with the average student in mind, without considering students with disabilities and students from less-resourced environments.

As higher education practitioners, we find ourselves catapulted into this Covid-19 online space with our diverse range of students with varying abilities. Also part of this diversity, and lying on the continuum of abilities, are students with disabilities. The reality of these students, and the support needed, has always run parallel to the support that all students need to study successfully.

Understandably, there is much concern around how students and staff will cope in the online environment, given the South African reality where people have varying technological abilities and resources. Given the global experience, we will also need to grapple with our own realities. For too long we have been teaching and assessing with the average student in mind, without considering, among others, students with disabilities and students from less-resourced environments. The average student is the one viewed according to average abilities and functionalities, has average to good eyesight and hearing, a range of movement that is unaided, comes from a fairly well-resourced environment and processes information very quickly.

Students are usually assessed in specific ways during a specific period, such as two or three hours answering memorised questions. Given the current online reality, we are now forced to consider and to work with students with varying abilities who do not fit into the average mould described above. More importantly, we must think of all students and the type of teaching, learning and assessment that would work best for all students.

The use of assistive technology has always been part of the support needed for many students with disabilities, but its availability was mixed. Assistive technologies were often needed because study material was not designed to accommodate all students. For example, if all reading material were in a format that would make it easy to enlarge fonts from the start, or to make it readable for screen readers or be captioned, then there would be no need to format a text. Now we are forced to think deeper about our online material: is the material uploaded and sent to the student in an accessible format? Is the student able to engage with the material, given data and bandwidth realities? How will the student be able to respond in the online space? These questions are relevant to all students.

Our Constitution and the Higher Education Act 101 of 1997 note the importance of addressing inequalities and diversity in education, and call for flexibility and redress in transforming our society. Discrimination against people based on class, race, gender and disability is outlawed. In 2018, the Department of Higher Education and Training released a strategic framework for disability in the tertiary sector to specifically address disability inclusion as part of diversity.

As a sector, we are constantly challenged by how best to be inclusive. However, we easily fall into the default mode of teaching, learning and assessment practices for the average student. In a sense, the Covid-19 pandemic has forced us to relook our curriculum and its design and outcomes and to focus on what needs to be learned and the various ways in which to do this. We are again reminded that our students have diverse home contexts with "no-to-low-to-high tech" availability to give their feedback and engage with reading material.

Large portions of our disabled student population are already reliant on assistive technologies to access teaching, learning and assessment material. Going forward, it will be worthwhile to consider Universal Design (UD) and Universal Design for Learning (UDL), as well as blended learning and massive open online courses (moocs), as ways to engage a diverse group of students.

UD and UDL have been discussed, written about and researched extensively in the past 10 to 15 years by organisations such as the center for Applied Special Technologies (CAST). In an article for the African Journal of Disability (2019), Elizabeth Dalton and her co-authors discuss how using the three principles in UDL can help promote equity and flexibility for diverse groups of students.

The first is the multiple ways of representing information. This is presenting multimedia formats, such as digital means, pictures, music, captioning, audio and pre-recordings. Second, allowing for multiple ways in which students can engage with learning material to engage their interests, such as voice notes, SMS, WhatsApp, blogs, group work, service learning and vlogs (from low to high tech). Third, multiple means of action and expression, where students can demonstrate their knowledge in various ways, such as essays, verbal inputs, web design, and tasks submitted via email, SMS, WhatsApp, blogs, vlogs, and PowerPoint presentations.

Robert Black, Lois Weinberg and Martin Brodwin from California State University also espouse the value of

using UD principles with specific reference to students with disabilities. Incorporating such principles in design in all course and assessment practices would be valuable to all students, given their natural diversity.

In a 2019article on the role of the Higher Education Disability Services Association in South Africa (HEDSA), I also drew attention to electronic lists or contact lists of people as a specific interest group and emails as common ways to share information. The use of low technologies is possible as a means to engage with UDL, given the prolific use of smartphones, as Willie Chinyamurindi from the University of Fort Hare recently pointed out in a piece for The Conversation. Echoing similar sentiments, Michael Rowe from the University of the Western Cape highlights the value of cell phones and exploring simple and low-cost universal modes of information sharing.

Despite our students' technological and contextual challenges, there are pockets of experience to draw from where low-cost and low-tech solutions have been used to engage students. Drawing on UD and UDL, it is possible to be flexible and explore various means that can add to this. Everybody is challenged and possibly rendered "disabled" in the online space, and drawing on existing expertise does not have to be daunting.

Being truly inclusive means we acknowledge that we cannot treat all students in the same way when there is so much diversity. Presenting material in various ways, such as a text of your talk and a recording of your presentation, already caters to many students as some might be stronger in reading and others better at listening. This benefits students with specific disabilities too, such as those with reading or writing disorders. Providing students with alternative ways to present their knowledge also allows for a student's particular strengths to emerge, as one might prefer to send an audio/voice note as a response, while another might send a text or Word document.

Incorporating the three core principles of UDL in our educational environments will open the space for an engaged student population, with flexible teaching, learning and assessment options. Low-tech resources such as voice notes, WhatsApp documents, video calls, and emails can then easily be incorporated. Basic messaging can be used for interaction and feedback.

Education policymakers have acknowledged the need for flexible curricula given our diverse student populations and the need for equity redress. Improving technologies in education has also been encouraged. More needs to be done regarding assistive technologies and designing accessible courses from the start for our students who have varying abilities and resources.

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HTTPS://WWW.DAILYMAVERICK.CO.ZA/OPINIONISTA/2020-06-18-ONLINE-LEARNING-DURING-LOCKDOWN-HELPS-US-FIND-WAYS-TO-TEACH-DIFFERENTLY-ABLED-STUDENTS/

Covid-19 could spell the end of the residential university

The pandemic has forced us to rethink the way universities operate. Change is happening fast and it's vital that new models of teaching and learning at higher education level are developed sooner rather than later.

The Covid-19 pandemic has catapulted our lives online at a speed we could not have imagined by the end of 2019. Access to a reliable internet connection has never been more important in a variety of sectors. It has, in a particular way, redirected most of our public universities. Suddenly, a conversation about the future implications of the 4th Industrial Revolution looks very different – the future is less far off.

And, where traditional residential or contact universities thought they could slowly introduce the possibility of online and/or blended learning opportunities, with a focus on the so-called learn-and-earn market, the implementation of remote emergency learning (based on the principles of online learning) was almost immediate.

At our institutions of higher learning, the focus is now squarely on conducive IT infrastructure, student connectivity and the possibility of hosting contact classes fully online. While this is not so strange for the postgraduate sector, it certainly is something new for the greater part on an undergraduate, full degree level.

Given, these adjustments are in the first instance made to guide us through the immediate challenges. But it is almost certain that lessons learned, and changes implemented, will have an impact on the future agenda. Only time will tell what the specific future long-term implications will be in the context of higher education.

How should we define a residential university?

Residential universities are loosely defined as institutions where on-campus/contact classes and living are promoted, and where the learning experience of students are packaged within a model that focuses on holistic, contact learning. These institutions see some students staying on campus and have as focus co-curricular programmes, including leadership development, sport, cultural activities, student societies, volunteerism, etc.

It should not be confused with residences/student housing as a 100% factor, i.e. a context where all students stay in university residences. This is just not possible in the context of South Africa. However, our models are geared to serve full-time students who stay on/close to campus and can afford to study on a full-time basis.

What have we learned during this period?

The number one lesson learned is that even old, bureaucratic institutions can adjust faster than we thought possible. And we might possibly be more prepared to take the jump than we thought.

We have seen IT advantages and disadvantages we would not under different circumstances necessarily think about. We have tested our systems and used bandwidth capacity we otherwise would not necessarily have tried.

Some of the other lessons include changes in institutional structures, different (new) ways of consultation, new means of communication, support and, of course, the agility to adjust not only to contextual changes and challenges, but also to new staff and student demands, needs and possibilities.

We have plunged into a context where you must learn/unlearn faster and where decisions taken one week may even change the following week.

These changes have been challenging for both students and staff. It is perhaps the first time in recent history that the professor and the student had to adjust to the same mode of teaching and learning at almost the exact same time.

Soon we will reflect on what we have learned, and it might just be that, in the process, we grab a copy of Aldous Huxley's famous novel, Brave New World.

International examples?

It is important to realise what plays out in our context might be specific, but it is not always as unique as we might think. It is clear the top universities in the world – the peers of some of SA's universities – have the same challenges. The adjustment from contact classes to online possibilities has not been easy. Nor has it been ideal. And universities all over the world have dealt with the immediate challenges in similar ways.

It does seem that, up to now, private universities abroad have been hit harder financially with budget cuts implemented or looming. In this regard, not even the prestigious Harvard University in the United States has been left unaffected.

We must still factor in possible financial implications within our own higher education sector.

Differing debates

At a recent online engagement on how Covid-19 related challenges and contingency procedures currently affect universities in South Africa, two discussion points particularly stood out.

The first has to do with transformation on SA campuses at large. In this regard, the fear was shared that current debates and contingency plans will overshadow the need for deep and real institutional change which should have, in effect, addressed some of our historical challenges.

As speakers reminded us, Covid-19 only really highlights the inequalities – it runs parallel to how things play out in the context of our country and further.

The second has to do with those who might have been left behind. Participants clearly expressed the fear that, while some universities celebrate the "success" of an adjustment to online learning – in some circles termed emergency remote learning – this mode will indeed impact on students who do not have access to the infrastructure needed to complete the academic programme as well as students whose home circumstances perhaps do not allow for this mode of learning.

Who is left behind?

The Minister of Higher Education and Training (DHET), Blade Nzimande, has remarked that, in as far as his department can prevent, no student will be left behind. It is, however, quite clear that the infrastructural and connectivity related challenges are huge. And, as in other sectors, the current crisis highlights the inequality in our higher education system.

To emphasise the inequality, it should be noted that the academic year plays out differently at our universities currently; some have only started the second term a couple of weeks ago while others are almost ready to start with semester exams. And other institutions are about to finish exams.

For no student to be left behind, the department will have to make sure that all universities, and thus all students, have access to the necessary infrastructure (not laptops only). And given the local challenges we face in our communities, it is clear extra support will have to be given to, for example, students in rural communities. All of this will be costly. And in a tight

economy, additional funds will be scarce, to say the least.

Time will tell whether the DHET, with the support of other national departments and universities, will have the means and the deliberateness to indeed make sure that no student is left behind.

Will the residential university survive?

But the question remains still: will the residential university survive post-Covid-19? And will this challenge call for the end of the residential university as we understand it?

Only time will tell. But what is clear is we have started to test a new model. And the early signs are that in the long run this model, in a variety of versions, might be more affordable and thus perhaps even more sustainable. Although we will see an initial financial burden linked to infrastructure, as time plays out, we might have a limited need for, for instance, student housing on campus as well as the ever-present need for additional classrooms, labs, libraries, etc.

But before we become too eager and too certain, we should consider that we have not yet started to calculate the added learning benefit provided through the residential experience and what the implications for this might be, should we limit the residential experience, as we currently (have to) do.

The appetite for online, blended, and residential programmes in the context of full-time undergraduate programmes up to now has been low. And in South Africa, the so-called learn and earn market is relatively small. Any fixed new model should also take this into account.

With all big shifts in the world, we are more prepared to cross new frontiers. This often moves us forward at a pace faster than we could have imagined. The Covid-19 pandemic might have the same impact on South Africa's public universities. What remains is for us to weigh up what is possible, what is affordable and what the impact will be on the learning experience and possibilities of our graduates.

Luckily, perhaps now more than ever, these questions are not only limited to South Africa and, as such we form part of a worldwide conversation on issues that might indeed affect us fundamentally.

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HTTPS://WWW.DAILYMAVERICK.CO.ZA/OPINIONISTA/2020-06-26-COVID-19-COULD-SPELL-THE-END-OF-THE-RESIDENTIAL-UNIVERSITY/

Ready to learn? The emotional impact of the Covid-19 pandemic and lockdown on South African children

When government talks about the re-opening of schools it is preoccupied with two things: the coverage of the curriculum and the conduct of year-end examinations. In other words, the planning for reopening, even a phased return to schools, frames children as cognitive machines which need to be oiled so that it can operate smoothly to deliver on pre-planned outcomes. If that metaphor sounds too harsh, ask yourself this question: why would government re-open schools when the country is still climbing towards the peak of infections, which according to the experts may only be reached in September or October of 2020?

In May 2020 I put out a call to children in primary and high schools across South Africa asking them a simple question: What was learning under lockdown like for you? My team expected about 100 or so stories but we were quickly overwhelmed with more than 620 stories from each of the nine provinces. The stories came from children as young as six and as old as 19. Some studied at elite schools and others at poor and working-class schools. Those in elite schools had access to fully online education while many others depended on downloaded content from WhatsApp groups, which they accessed if and when devices and data were available. Many relied only on intermittent programming through radio, television and occasionally print material from the local school.

What all these students had in common, though, was the experience of emotional distress experienced during the extended lockdown. Their stories are heart-rending and every government official, school principal, teacher and

parent should read these stories before rushing to re-open schools or sending children back to them. What exactly were the students distressed about?

Many students spoke about the distress of social isolation. They experienced loneliness that comes with separation from schoolfriends, teachers and even in some cases, parents who were essential workers or vulnerable grandparents who were sheltered in place. When a relative died, as sometimes happened, that stress was compounded. All the students were anxious about the academic year. Would they be able to write and pass the examinations to proceed to the next grade? Would they still be accepted at university if the "matric exam" was postponed or if they simply did not receive enough teaching to adequately prepare to write that all-important, end-of-school examination?

Many students felt that they could not learn in isolation and needed the structured environment of a traditional classroom. As they struggled with their new reality, the work piled up but so did the stress of falling behind. For especially disadvantaged students that stress was made worse by trying to learn in crowded settlements with constant distractions and interruptions. The family noise meant many of them had to study at a neighbour's flat or wait until everyone was asleep at night before they could resume studies.

What did not help was the on-again-off-again scheduling of the re-opening of schools. Their hopes were raised and then dashed from the moment the initial lockdown was extended to the education department's changing of the dates of re-opening for everyone, and then for different grades. All this confusion had massive emotional impacts on young hearts and minds. Then of course there was the existential threat of the pandemic itself: what if I or my parents do not survive?

The everyday lives of children are filled with enough stresses and then comes the emotional turmoil of the pandemic lockdown. A student's parents' divorce in the middle of the shutdown. Another is deeply worried because she barely survived Ebola. Data or bread? Several students mention this difficult choice they have to make given that their parents are on grants. All of this builds up the emotional and psychological distress among the students in our study.
What does this mean for the re-opening of schools? The distinguished virologist Professor Shabir Mahdi told me that schools should not even think about normal teaching and learning when they re-open. They need to give attention to the emotional needs of children including the reassurance of comfort and care.

Of course, parents need to play a role in supporting their children too. In order for children to process their thoughts and feelings, they need to be engaged in on-going and guided conversations with caring adults. A safe and practical way to encourage younger children – who are often unable to identify and to talk about their feelings – is through the sharing of stories. For more information on how to use stories to engage children in conversation around difficult emotions, visit the Nal'ibali reading-for-enjoyment campaign's website, or join its free WhatsApp webinar on Thursday 16 July at 3 p.m.

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HTTPS://WWW.IOL.CO.ZA/NEWS/OPINION/READY-TO-LEARN-THE-EMOTIONAL-IMPACT-OF-THE-COVID-19-PANDEMIC-AND-LOCKDOWN-ON-SOUTH-AFRICAN-CHILDREN-50691597

Six reasons why schools must be open if we are to fight Covid-19

Nationwide lockdowns and school closures have incredibly high costs for families and children. Limiting Covid-19 infections must be a top priority, but it cannot come 'at any cost'.

These are six main reasons why schools must remain open while implementing rigorous safety protocols and physical distancing:

Schools provide essential meals to hungry children

When schools were open and operational, they provided a nutritious meal to 9 million children every day. Child hunger has more than doubled since the start of lockdown with 1-in-7 people reporting that a child went hungry in their household in the past week. The

courts have ordered the Minister of Basic Education, Angie

Motshekga to reinstate school feeding for all 9 million children immediately. Realistically, schools cannot provide meals to 9 million children if they are closed. While children do not get severely ill from Covid-19, they are at risk of suffering from stunting and malnutrition.

You cannot reopen the economy without reopening schools

There are 4.5 million essential workers in South Africa and 650,000 healthcare workers who are on the frontline of dealing with the pandemic. If schools are closed, what happens to their children while they are at work? We compromise the healthcare system if schools are closed. Furthermore, we have already lost 3 million jobs during 2020, plunging more than 1 million people into food poverty. Parents cannot go back to work if schools are closed.

There is no evidence that schools lead to above-average Covid-19 infections among teachers or pupils

It is true that some teachers have been infected with Covid-19, but it is also true that many teachers were infected even before schools reopened. Teachers are more likely to get infected in their community than at school. An analysis of 709 Gauteng schools shows that Covid-19 infection rates are no higher among teachers than similar people in the Gauteng population. Put differently, just because teachers get infected does not mean they got it at school. Further evidence comes from hospital admission data from the Western Cape during its Covid-19 surge and provides reassuring evidence. Opening schools had little impact on children getting infected with Covid-19 or getting admitted to hospitals.

Medical experts and advisors are saying that children returning to school is what is in the best interests of the child

The South African Paediatric Association, the Ministerial Advisory Committee and the South African Human Rights Commission have all stated clearly that they believe that children returning to school is in the best interests of children. The costs of being locked up at home (potentially alone), are far greater than the small risks they face at school. Children do not get severely ill from Covid-19. Those under the age of 20 make up less than 1% of total Covid-19 deaths in SA.

The World Health Organisation's recommendation must be contextualised to South Africa

When the WHO is making recommendations, it is doing so for 195 countries. But there is no one size fits all approach. What makes sense for Germany might not make sense for Malawi. What makes sense in South Korea does not make sense in South Africa. They do not have 1 million stunted children, widespread HIV and TB, school feeding schemes etc. South Africa's own epidemiologists are advising that schools must stay open if we are to fight the pandemic.

School closures will increase inequality

Only 20% of households have a computer and 10% have an internet connection. Closing schools will increase inequality between rich and poor for the next 10 years. Elderly teachers with serious comorbidities should be replaced in schools. Schools that do not have adequate masks and sanitisers should remain closed until they do, but closing all schools will hurt the poor much more than temporarily closing the 10-20% of schools that are not yet ready to open.

Teacher unions are undermining our pandemic response. All other government officials as well as those in the private sector have gone back to work and implemented physical distancing, wearing masks etc. But somehow teachers are different? The evidence is showing that teachers are not at higher risk than others and yet they are being paid whether they work or not. By refusing to work, they are risking the lives of children and undermining other parts of society that rely on schools at this critical time. By forcing parents to choose between going to work and taking care of their children at home, they are weakening our ability to fight the pandemic.

The question is not: "When is it safe to reopen schools?" The question is: "Does the cost of closing schools outweigh the benefits?" We should not implement a nationwide lockdown again and we should not implement nationwide school closures either. The costs to children and their families are simply too great, and importantly, fighting the pandemic needs all hands on deck and schools need to be open for that to happen. Limiting Covid-19 infections must be a top priority, but it cannot come "at any cost".

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HTTPS://WWW.DAILYMAVERICK.CO.ZA/ARTICLE/2020-07-22-SIX-REASONS-WHY-SCHOOLS-MUST-BE-OPEN-IF-WE-ARE-TO-FIGHT-COVID-19/

National lockdowns and national school closures are not the answer

Nationwide school closures will be devastating, especially for children and women. By refusing to work, teachers are risking the lives of children and undermining other parts of society that rely on schools at this critical time

A Grade 7 learner from Funukukhanya Primary School at Tsakani, Ekhuruleni. Picture: Freddy Mavunda

A Grade 7 learner from Funukukhanya Primary School at Tsakani, Ekhuruleni. Picture: Freddy Mavunda

Last week we launched the results of the National Income Dynamics Study: Coronavirus Rapid Mobile Survey, which showed that 3-million people have lost their jobs as a result of the pandemic and the lockdown, two-thirds of them women. As we now contemplate whether to close schools again, we must acknowledge the associated costs — for families and especially women and children.

The government has the incredibly difficult task of balancing plague and famine. What our earlier results showed was that the costs of the lockdown and the pandemic have been felt mainly by the poor, the less educated, those in the informal sector, and especially women. Only 5% of the rich have lost their jobs, compared with 38% of the poor (where the poor are those earning R3,000 or less a month and the rich are those earning upwards of R24,000 a month).

The government is trying to be responsive to this and is aware of who is most affected by these lockdowns. President Cyril Ramaphosa's latest speeches make that clear. As he said at the beginning of the month: "The issue of another hard lockdown is something we're not considering now … the issue of losses of jobs is concerning to us … when we moved to the various other levels, including level 3, we were responding to trying to stem the job losses that could ensue from the hard lockdown."

Yet we are about to do the exact same thing in schooling: a nationwide lockdown of all schools. The decision to close schools, like the decision to close the economy, should not be taken lightly. It is likely to have far-reaching consequences and would have incredibly high costs for women and children in particular. Of course there are costs to reopening schools, but there are also costs to closing them. The question is whether the benefits of opening schools outweigh the costs, and I believe they do. Let me explain.

First, you cannot reopen the economy without reopening schools. Working parents (including doctors and nurses) don't have anywhere to put their kids while schools are closed but they are expected to go back to work. Researchers Andrew Kerr and Amy Thornton estimate there are about 4.5-million essential workers, about 650,000 of whom are health-care workers at the frontline of this pandemic. What are they meant to do with their children when they go to work?

And we are no longer in the world where only essential workers are at work. Now that we are at level 3, there are literally millions of parents who have to go back to work but don't know what to do with their children. Some might be able to arrange extended family care or neighbours to help, but we are talking about taking care of 12-million children who are normally at school from Monday to Friday. Child care and schooling is an essential component of our country's economic infrastructure and an essential part of our pandemic response.

Second, there are now 9-million and one reasons children need to be at school. On July 17 judge Sulet Potterill ruled that basic education minister Angie Motshekga was in breach of her constitutional duty, having suspended the provision of free school meals to 9-million children who rely on them, and that this was "an extreme rights infringement". Potterill went on to say: "A more undignified scenario than starvation of a child is unimaginable."

If one considers the logistics of providing free meals to 9-million children, that is practically impossible if schools are closed.

Third, there is no evidence that schools lead to above-average Covid-19 infections among teachers or pupils. It is true that some teachers have been infected with Covid-19, but it's also true that many teachers were infected even before schools were opened.

Teachers are more likely to get infected in their community than at school. Analysis of 709 Gauteng schools shows that Covid-19 infection rates are no

higher among teachers than among similar people in the Gauteng population as a whole. Put differently, just because teachers get infected doesn't mean they got it at school.

Further evidence comes from hospital admission data from the Western Cape during its Covid-19 surge and provides reassuring evidence. Opening schools had little impact on children getting infected with Covid-19 or getting admitted to hospitals.

The question should not be whether to close schools again, or whether to close the economy again — the costs are simply too high. The question should be how we implement and enforce a set of safety measures to ensure that any transmission is minimised in the workplace and at schools. All other government officials as well as those in the private sector have gone back to work and implemented social distancing, wearing masks and so on. But somehow teachers are different?

The evidence is showing that teachers are not at higher risk than others and yet they are being paid whether they work or not. By refusing to work they are risking the lives of children and undermining other parts of society that rely on schools at this critical time. The "nuclear" option of a hard lockdown or nationwide school closures will be devastating, especially for children and women.

By forcing parents to choose between going to work and taking care of their children, it will also weaken our ability to fight the pandemic. Limiting Covid-19 infections must be the top priority, but it cannot come "at any cost". We must find another way.

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HTTPS://WWW.BUSINESSLIVE.CO.ZA/FM/OPINION/ON-MY-MIND/2020-07-21-NIC-SPAULL-NATIONAL-LOCKDOWNS-AND-NATIONAL-SCHOOL-CLOSURES-ARE-NOT-THE-ANSWER/

Covid-19 second wave forces a rethink on the reopening of schools on 25 January

We all knew a second Covid-19 wave was on its way. Knowing how the virus had affected schools, education authorities were able to plan for 2021, but no one could have foreseen that it would be so extensive and so much more deadly.

There is great concern over the rising number of Covid-19 infections and deaths among teachers. In Gauteng alone, 32 teachers died in one week. According to Die Son newspaper, the Western Cape has lost 78 teachers over the past two weeks and 573 are fighting for their lives. Countrywide, 1,659 teachers have already died from the virus. There are fears of a shortage of teachers when the school year opens.

On Monday, 45,000 teachers began marking millions of matric exam papers. From experience, I know these marking centres can be highly populated. If markers suddenly fall ill, and some do not turn up for fear of contracting Covid-19, there will be another crisis facing us.

During the peak of the first wave in July and August 2020, schools closed for a month when infections rose to 140,000. During the past month, a new peak was reached. When the president announced stricter lockdown regulations on 5 December, there were 44,084 infections countrywide. We are now approaching 170,000. The number of infections, especially in KwaZulu-Natal (63,690), the Western Cape (42,388) and Gauteng (32,235), is of great concern. It raises the question of whether schools should reopen in these provinces on 25 January.

In 2021, most schools will still operate on the principle that pupils attend on alternate days. One union has already said it doesn't want to start the year with the same battles as 2020.

But the question is still whether all schools are ready for the second wave. Problems that will rise again include: Do all pupils have at least two masks? Do all schools have running water and sufficient sanitation facilities if pupils and teachers contract the virus? Has any progress been made to give more rural and township schools access to online classes? Is the current minister fit for her task?

I do believe children must be in school, but can we honestly say all children and teachers are safe when schools reopen? It is clear that during the second wave, children get sick too and even die. If more teachers get sick and die, we can expect an exodus of teachers, which could paralyse the education system. That is why we should reconsider opening the schools on 25 January.

Teachers and health workers were the heroes of 2020. For that we honour and thank them. Unfortunately, the

task of teachers will not be less daunting in 2021. May the lessons learnt in that year offer solutions to this year's challenges.

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HTTPS://WWW.DAILYMAVERICK.CO.ZA/OPINIONISTA/2021-01-05-COVID-19-SECOND-WAVE-FORCES-A-RETHINK-ON-THE-REOPENING-OF-SCHOOLS-ON-25-JANUARY/

Who will care for the caregivers? Our teachers are being thrown into the Covid lion's den

While the Covid-19 pandemic rages at its fiercest and the reopening of schools has been postponed due to concern over the safety of learners, the welfare of teachers must also be kept in mind. Let's not forget: nearly 2,000 educators have already died.

As I write this article, I have just received the message that my colleague Mohammad Karaan, professor in agricultural economics at the University of Stellenbosch and president of the Maties Rugby Club, has died from Covid-related complications.

This follows the news that the hard-working deputy principal of Paul Roos Gymnasium, Werner van Rensburg, with whom I worked closely for a long time, had died earlier. There are so many others.

With the first wave of the pandemic, we talked numbers. But with the second wave, the numbers have acquired names. The virus is on everyone's doorstep. Space limitations prevent me from honouring them all, but be assured of my sincere condolences. Each teacher we lose leaves a void which is hard to fill. Over the past few days, I could not help thinking: Who is caring for the caregivers?

A touch of love

The true caregiver does not just keep an eye on someone or something, but looks after them, cares for them, even nurses them. This is a process of supervision, but with a touch of love. And this is what teaching is, and has always been, in the traditional sense of the word.

But now the carer has fallen ill.

The reference to the passing of Karaan and Van Rensburg serves to illustrate what my colleagues and I experience daily. Every day starts with the messages on WhatsApp and Facebook. Every hour we receive more disturbing news, and the list gets longer and longer. A friend on Facebook recently wondered: "When will this end?"

With each snippet of news, you become panic-stricken anew, wondering when death will come knocking on your door. Your thoughts wander and your attention is not on your work. Can people not understand that at this moment you do not want to be in a classroom? Is it so difficult to realise that you first need time to yourself to clear your head and to phone the next of kin?

You search for words with which to express your sympathy, knowing that they are empty words. How do you console someone whose loved one was never sick, but has suddenly been ripped away?

Then your phone rings. Friends in your group are making enquiries, and there are explanations and queries. "Why him? All the good people are dying," reads one comment.

Living in fear

You must decide whether you will attend the funeral. You are aware that only 50 people are allowed, so if the family invites you, you feel too guilty to refuse. You know that they had to refuse others, even relatives, to accommodate you.

But truth be told, you actually wish that they had not invited you. You so much would like to go because he or she was such a good person. But you fear the virus… all of us have had this experience during the past two months.

Then the debate on the reopening of schools started. I looked at the viewpoints in the debate and wondered whether this is all that matters. Are our children really going to miss so much if they start a week or two later?

If we wait until the worst is over, and the infections and disturbing phone calls decrease?

Maybe we must ask who wanted the schools to reopen? Maybe those who teach classes online without the danger of contracting the virus?

Do we really know what goes on in the hearts of teachers who have to make vital choices in the townships every day? Those who have to wipe little noses, feed and even wash and dress children? Where there are still no toilets or fresh water to wash your hands? Where online classes are not part of their existence?

They don't see the problem

In a previous column, I asked whether the Department of Education was giving attention to supplying masks to learners, especially now that they are compulsory? And what about running water, sanitation facilities and internet connections? My information is that at many schools these requirements are not yet in place. Why was nothing done during the holidays to supply water and toilet facilities to schools? My patience with the relevant ministers ran out a long time ago.

And then President Cyril Ramaphosa comes with the defence that "we should appoint cadres who are more capable"!

As the English author GK Chesterton said: "It isn't that they can't see the solution. It is that they can't see the problem."

Where does the urgency of some of those involved in the debate to force teachers to return to school come from? To do what? To look after children who were left to their own devices by their parents for two months? Last year the curriculum was quickly and easily shortened. Did the heavens fall upon us then? A curriculum is a human-made construct which we can easily catch up with. The same does not go for learners and teachers who have lost their lives.

Most vulnerable

I made enquiries with a school principal colleague about why so many teachers had died during the holiday. His answer was staggering: most teachers went through hell in 2020. The tension and pressure were unbearable. To teach every day with death staring you in the face took its toll. The virus caught them when their immune systems were at their most vulnerable.

Nearly 2,000 teachers have already died.

Thousands more are sick and in isolation. While hundreds are fighting for their lives in overcrowded hospitals, there are those who want teachers to return to school in these circumstances. To care for their children. While they themselves are not emotionally or physically healthy to look after themselves, let alone care for children.

It is they who should be our priority now. Not assessments which must be "finished" by the end of February. That can wait.

The narrative has always been that true teachers are prepared to give so much of themselves that they forget about their own health. I thus urgently call on teachers to be extra careful in these times, because clearly there is a new narrative in the new normal: Teachers must be prepared to sacrifice their lives.

Trauma counselling

In this country, great emphasis is placed on the welfare of children, and rightly so, but the question remains: Who is taking care of the caregivers? I have not read anywhere or heard of teachers receiving trauma counselling for post-traumatic stress.

At the University of Stellenbosch, everyone has to use the Higher Health Check app before they may go to campus. It helps Maties to get quick responses on their health and decreases the risk of infections. Is something similar in the pipeline for teachers? Or is Daniel being thrown into the lion's den with a prayer that an angel will care for him?

My message to teachers is the vital lesson of Peter Bailey of Minnesota in the US, who cared for his invalid wife for years before she died: "Like aeroplane passengers, let's not forget to put on our own oxygen masks first… we are no good to our loved ones if we collapse under the strain."

Werner van Rensburg and Mohammed Karaan served their fellow beings on so many terrains. Now we have only the memories of their good deeds.

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HTTPS://WWW.DAILYMAVERICK.CO.ZA/OPINIONISTA/2021-01-19-WHO-WILL-CARE-FOR-THE-CAREGIVERS-OUR-TEACHERS-ARE-BEING-THROWN-INTO-THE-COVID-LIONS-DEN/

Resuming the national school nutrition programme is a vital test for children's socio-economic rights

The outcome of the case concerning children's rights to food and basic education, to be argued before the Gauteng North High Court on Thursday, will shape the terrain for achieving effective accountability for socio-economic rights in South Africa for years to come. At the heart of the case lies the fundamental question of whether the socio-economic rights enshrined in the Bill of Rights has real meaning for hungry children.

One of the major achievements of the South African Constitution is a judicially enforceable Bill of Rights that integrates civil and political rights alongside economic, social, cultural and environmental rights.

Human rights represent the most fundamental freedoms and material goods and services needed by human beings to survive and thrive in society. South Africa's Bill of Rights recognises that all rights are interdependent, and must be interpreted holistically in order to achieve the foundational constitutional values of human dignity, freedom and equality. However, without effective accountability mechanisms, human rights norms amount to no more than empty promises. As our constitution recognises, the courts are the final port of call for those whose human rights are violated.

On Thursday 2 July, the North Gauteng High Court is set to hear a case concerning the interpretation of the socio-economic rights enshrined in the Bill of Rights, specifically those accorded to the most vulnerable in our society – children living in poverty.

Equal Education and the governing bodies of Vhulaudzi Secondary School and Mashao High School (Limpopo) have launched an application to compel the Minister of Basic Education and the MECs of the provinces to implement the national school nutrition programme (NSNP) in such a way that it provides a daily meal to all qualifying learners.

They have also asked the state to oversee the implementation of the NSNP to all qualifying learners through government filing regular progress reports to the court. The University of Cape Town's Children's Institute represented by the The Centre for Child Law at the University of Pretoria has entered the case as an amicus curiae (friend of the court).

Background to the case

When schools closed on 18 March 2020 due to the Covid-19 pandemic, and the lockdown measures taken pursuant to the national state of disaster, the NSNP was suspended. On 8 June, Grade 7 and 12 learners returned to school in line with the phased easing of lockdown measures.

The applicants note in their court papers that various undertakings were given by the Minister, Department of Basic Education and Council of Education Ministers that when learners returned to school on 8 June, the NSNP would be resumed for all qualifying learners, including those whose classes had not yet resumed.

However, in an apparent about-turn, the minister announced that when Grade 7 and 12 learners returned to school on 8 June, only they would be provided with meals. Although the government claims in its legal papers that it is now taking steps to roll out the NSNP to all learners, the applicants contest this.

Together with partner institutions such as the Legal Resources Centre, the applicants have undertaken a rapid survey of schools, which reveals that there is in fact no coherent plan to roll out the programme to all learners, and that "administrative chaos and confusion are widespread".

The food poverty line is the rand value below which a person would be unable to afford enough food to supply them with the minimum daily per capita energy requirements for adequate health as defined by the WHO (2,100 kilocalories).

The NSNP was introduced by the first democratic government in 1994. It is a flagship programme of which the government can be justifiably proud. As the government noted in a recent report to the UN Committee on Economic, Social and Cultural Rights:

"Daily meals are provided to nine million learners in 20,000 schools through the National School Nutrition Programme. The programme aims to foster better quality education by enhancing children's active learning capacity, alleviating short-term hunger, providing an incentive for children to attend school regularly and punctually; and addressing certain micro-nutrient deficiencies. School feeding is part of the Integrated Food Security Strategy for South Africa."

The NSNP has two main objectives.

First, it aims to ensure that education can be effectively enjoyed by all children, particularly those at risk of food insecurity and malnutrition. Second, it is a measure to address child nutrition and food security. The constitution recognises the right of every child to a "basic education" in section 29(1)(a) of the constitution, and to "basic nutrition" in section 28(1)(c).

As Katharine Hall, a senior researcher at the Children's Institute (UCT), noted in a supporting affidavit to the amicus curiae submissions, six million of South Africa's 20 million children live in households with no employed adults. Even taking all social grants into consideration, about one third (6,4 million children) live in households where income is below the food poverty line.

The food poverty line is the rand value below which a person would be unable to afford enough food to supply them with the minimum daily per capita energy requirements for adequate health as defined by the WHO (2,100 kilocalories). Unless a person's diet is

supplemented in some way, anyone living below the food poverty baseline of R561 per person (in 2019), would be at risk of malnutrition, with serious threats to their survival, health and development.

In this context, the NSNP – which is provided to schools in quintiles 1-3 (the poorest 60% of schools) and some quintile 4 schools – plays a critical role in supplementing the nutrition of half of all children in the country – 9,6 million children in total.

This role has become even more vital given the severe economic impacts of the lockdown. According to Jeremy Seekings of UCT, in an expert affidavit submitted in the case, the food crisis has worsened significantly. He demonstrates that other measures taken by the government, such as increasing social grants and the delivery of food parcels, have not been nearly sufficient to plug the hole left by the suspension of the NSNP. According to Seekings, food parcels and feeding schemes reached only a small fraction – one-fifth, perhaps only one-tenth – of the households that needed them. He describes the suspension of the NSNP as "a colossal disaster for getting food to poor children".

Interpreting socio-economic rights

This case raises a number of significant issues relating to the interpretation of the socio-economic rights of children in our Bill of Rights.

First, who bears the responsibility to provide for children's basic socio-economic rights protected in section 28(1)(c) of the constitution? This section provides that every child has the right "to basic nutrition, shelter, basic health care services and social services".

In the Grootboom case, Justice Zak Yacoob held that when children are being cared for by their parents or families, the state is not obliged to provide shelter on-demand to parents and their children. In other words, parents and guardians bear the primary responsibility of providing for their children, while the state has secondary obligations to support children and their families to ensure that children are accorded the protection contemplated by section 28. When children are not in family care (for example, when they are in alternative care or abandoned), the state assumes the primary duty to fulfil children's socio-economic rights.

In the subsequent TAC case, the court clarified that the state's obligations with respect to children's socio-economic rights are also triggered when parents or families lack the means to provide for children's socio-economic needs themselves. This is in line with international law such, as the UN Convention on the Rights of the Child. Thus section 27 of the Convention on the Rights of the Child (ratified by South Africa) provides that:

"parent(s) or others responsible for the child have the primary responsibility to secure, within their abilities, and financial capacities, the conditions of living necessary for the child's development."

States Parties, in turn, have the duty, within their means, to:

"take appropriate measures to assist parents and others responsible for the child to implement this right and shall in case of need provide material assistance and support programmes, particularly with regard to nutrition, clothing and housing."

Thus the constitution and relevant international law establishes that when parents cannot provide for their children's socio-economic needs due to poverty, the state has a legal duty to assist them through programmes that enable children's survival and development.

The second legal issue raised by the case is: What is the relationship between the right of children to a basic education in section 29(1)(a) of the constitution, and the right to basic nutrition in section 28(1)(c)? In addition to being an essential programme to fulfilling children's right to basic nutrition in s 28(1)(c), can the NSNP also be regarded as an essential component of the right to basic education in s 29(1)(b)?

Government's own conception of the programme is clearly that it enhances children's learning capacities, thereby fostering quality education. This legal question raises the interdependence between rights as integral to a substantive, transformative interpretation of the Bill of Rights. It implies that when it is not possible to protect one right in the Bill of Rights without also protecting elements of other rights, then those elements should also be regarded as essential components of the relevant right.

The Constitutional Court has endorsed the interconnectedness of rights and their relevance to the interpretation of socio-economic rights. In addition, our courts have recognised education as a holistic right, which encompasses the preconditions for effective teaching and learning such as the provision of textbooks, infrastructure such as school furniture, and scholar transport. Given that it is indisputable that the school nutrition programmes play a vital role in ensuring effective learning for children experiencing food insecurity, such programmes are clearly an integral part of the right to education, particularly in a context of widespread food insecurity.

The Constitutional Assembly clearly intended to impose a direct duty on the state to ensure a basic floor of services to children, given their particular vulnerability and importance to the future of any society.

The third legal issue that arises from this case concerns the nature of the duty imposed on the state by sections 28(1)(c) and 29(1)(a) of the constitution. Both of these constitutional provisions do not contain the qualifying phrases of "reasonable measures", "progressive realisation", and "within available resources", which are present in the case of the socio-economic rights of "everyone" in sections 26 and 27 of the constitution.

The Constitutional Assembly clearly intended to impose a direct duty on the state to ensure a basic floor of services to children, given their particular vulnerability and importance to the future of any society. Indeed this is how the Constitutional Court has interpreted the right to basic education in section 29(1)(a). Thus in Governing Body of the Juma Musjid Primary School v

Essay N.O, the Constitutional Court held that the right to basic education is "immediately realisable" and subject only to limitation in terms of the stringent requirements of the general limitations clause in the Bill of Rights (s 36). Given that section 28(1)(c), which protects the right to basic nutrition, is similarly unqualified, one expects that it too will be treated as an immediately realisable right.

However, in the NSNP case, we are not dealing with the absence of a programme giving effect to the relevant children's socio-economic rights. A programme has been put in place and budgetary provision has been made for the NSNP for 2020 through a conditional grant. This programme has made a major contribution to enabling South Africa's children to enjoy their rights to basic nutrition and education.

What is the legal position, then, when such a programme is withdrawn and is no longer available to all children who previously had access to it?

The Constitutional Court has held in cases such as Jaftha v Schoeman, as well as the Juma Musjid case, that when people enjoy existing access to a socio-economic right, and the state takes measures that effectively impair or deprive the beneficiaries of such access, this amounts to a so-called "negative" violation of the relevant rights.

Again such measures can only be justified under the general limitations clause, which requires a law of general application, a weighty reason, consideration of less restrictive measures, and a proportional balance between the impact of the measure and its purpose.

In the present case, the state does not seem to be relying on the general limitations clause to justify the suspension of the NSNP. It is also noteworthy in this context that both the UN Committee on the Rights of the Child and the UN Committee on Economic, Social and Cultural Rights strongly discourage "retrogressive measures" that diminish existing levels of protection of socio-economic rights. According to the respective UN committees, such measures require very weighty justifications, a proportionality inquiry, and the protection of essential needs. As the NSNP is a programme to fulfil immediate, essential needs of an extremely vulnerable group, it is doubtful whether its suspension would fulfil these international law criteria.

Remedying human wrongs

Finally, the case raises the question of the appropriate remedy should the Applicants succeed on the merits of the case.

As noted above, in addition to declaratory and mandatory orders, the applicants have also requested a supervisory order for the court to oversee the roll-out of the NSNP to all qualifying learners. Such orders are not unprecedented in our jurisprudence and are usually given in cases where the breach of rights has very serious consequences and there is evidence that the government will not implement the order satisfactorily or expeditiously. The applicants argue that these factors are present in the current case.

These legal issues do not raise simply abstract points of law relating to the interpretation and enforcement of the socio-economic rights in our constitution. The outcome of the NSNP case will shape the terrain for achieving effective accountability for socio-economic rights in South Africa for many years to come.

At the heart of the case lies the fundamental question of whether the socio-economic rights enshrined in the Bill of Rights has real meaning for hungry children. DM/MC

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HTTPS://WWW.DAILYMAVERICK.CO.ZA/ARTICLE/2020-06-29-RESUMING-THE-NATIONAL-SCHOOL-NUTRITION-PROGRAMME-IS-A-VITAL-TEST-FOR-CHILDRENS-SOCIO-ECONOMIC-RIGHTS/

In This Section

Covid-19 shows us yet again: Don't mess with Mother Nature

Rushed research in the time of pandemic panic has led to questionable research and conspiracy theories about the origin of the virus – but genetic analysis of the virus has shown that it is highly unlikely that it originated in a lab, writes Kristien Nel van Zyl, Wolfgang Preiser, Andrew Whitelaw and Susan Engelbrecht in an opinion piece for *Daily Maverick*.

With the entry of SARS-CoV-2 – the virus responsible for Covid-19 – into the human population and the rapid spread of the pandemic, the general public as well as the medical and broader scientific communities have been bombarded by an extraordinary number of articles in scientific journals and on pre-publication servers, as well as in popular media, including social media. This has led to a change in publication norms, with expedited publications reaching the public within days of receipt and preprint servers being close to overwhelmed.

While this has allowed for worldwide dissemination and research efficiency on an unprecedented scale, it is no surprise that some questionable research has slipped through. As shown in the past, a single "bad" paper can overshadow many more legitimate ones. To combat this, many preprint servers and publishers now have filters – but is it too little, too late?

Many conspiracy theories regarding the origins of SARS-CoV-2 have taken hold, partly due to the propagation of these theories by respected professionals in both the scientific and medical fields.

We are aiming with this article to debunk some common misconceptions and misrepresentation by summarising peer-reviewed, credible research showing that this novel virus has a "natural" origin and the unfortunate ability to spread further and faster than previous coronaviruses.

Manufacture

A major contributor to the manufacture theory was the presence of supposedly "unnatural" DNA sequences in the novel coronavirus genome. This

theory first came about in a preprint in January 2020, where the authors claimed to have found striking similarities between the novel virus's spike

glycoprotein and two HIV proteins, gp120 and Gag. The research was retracted less than a week later, due to the input and comments from peers that pointed out that the methods used were rushed and incomplete, and that the conclusions drawn were, at best, coincidence.

Furthermore, a comment published less than a week later thoroughly debunked every conclusion drawn by the preprint by showing how the original bioinformatics analysis was flawed.

Despite the retraction, and the evidence against the link to HIV, this question was thrown into the spotlight again by French Nobel Prize winner, Luc Montagnier, in an interview in April 2020. Claims were made that the virus was created during HIV vaccine research in Wuhan. Some people, including some scientists, used these claims to support the theory that an artificial coronavirus escaped from the Wuhan laboratory, either accidentally or by purposeful release. However, if this were the true source of SARS-CoV-2, evidence would have been found in the viral genome, since several reverse-genetic systems are already available and commonly used for betacoronaviruses, such as SARS-CoV-2. No such evidence has been found by any of the teams that conducted whole genome sequencing on various samples from the outbreak.

Another theory suggests the escape of a "natural" laboratory virus. On the face of it this may seem plausible, especially given past incidences of SARS-CoV viruses that escaped from laboratories that work with virus culture. There have been incidents of SARS-CoV-1 infection occurring in laboratories: in Singapore, in Taiwan, and two cases in China, leading to three generations of infections due to human-to-human transmission outside the laboratory. All three incidents involved SARS-CoV-1 strains from samples being used in these laboratories.

A second point brought up by some in the medical profession is that the novel virus must be human-made, as it should not be spreading so rapidly across the world. "Human" coronaviruses HCoV-OC43, HCoV-229E, HCoV-HKU1 and HCoV-NL63 are indeed seasonal. They have circulated in human populations for at least decades, if not centuries, and may have originated from an animal source originally. (Interestingly, HCoV-HKU1 and HCoV-NL63, despite having been present for decades, were discovered only after 2003 due to much increased research interest in human coronaviruses).

While the current Covid-19 outbreak began and spread during the northern hemisphere winter months, it has continued to spread during the northern hemisphere spring and summer and also in warm climatic zones such as Brazil. While virus stability may be impaired by higher temperatures, the infection pressure during an outbreak and the fully susceptible population are likely to overcome this impediment.

This is supported by previous coronavirus outbreaks. Severe acute respiratory syndrome (SARS) started in winter and persisted into summer. Middle East respiratory syndrome (MERS) was brought to Korea via a single traveller in May 2015 and caused an outbreak during warmer months.

Last, many researchers and clinicians fear that this novel virus spreads too rapidly to be a natural coronavirus. While it is indeed spreading faster than SARS-CoV and MERS-CoV, possible reasons have been found in its ribonucleic acid (RNA). SARS-CoV-2 has distinct mutations in its spike protein, specifically the receptor binding domain (RBD).

The RBD gene is the most variable part of the coronavirus genome and mutations here can affect how well the virus can enter cells. Some argue that this is a reason to believe it was purposefully inserted; however, the backbone sequence of the virus does not support the genetic manipulation theory. Other mutations in this region give more credit to zoonotic transfer events, as will be explained next.

Mother Nature

In a sense, the occurrence of this pandemic had been forewarned by the scientific community. Highlighted here are just four of many articles that were written before the discovery of SARS-CoV-2: in September 2019, January 2019 and October 2007, and strikingly, a report written in the wake of the SARS epidemic in 2003. All suggest that future coronavirus outbreaks are likely to originate from bats or exotic animals, specifically in China. The picture painted by literature since the start of the pandemic shows how these predictions have come true.

Comparisons of the genomes of the novel coronavirus SARS-CoV-2 with SARS-CoV, MERS-CoV and a large assortment of other coronaviruses, including many SARS-like coronaviruses found in bats, have been made in multiple publications by unrelated author groups. Genetic comparison found that the novel virus is less closely related to MERS-CoV (~50%) than to SARS-CoV (~79%). Phylogenetic analysis placed SARS-CoV-2 in the genus *Betacoronavirus*, subgenus *Sarbecovirus* and showed that it formed a distinct clade within the species *Severe acute respiratory syndrome-related coronavirus*; it was subsequently named SARS-CoV-2 following established naming practices.

Evolutionary analysis in early 2020 found that the closest relative of SARS-CoV-2 was a previously isolated bat coronavirus (RaTG13) from China (96% sequence homology). More recently, another coronavirus (RmYN02) isolated from bats that were collected in China in 2019 was shown to share 97% identity in the lab gene. While it is not the exact variant that caused the outbreak, it shows that the progenitor of SARS-CoV-2 probably originated in bats. Transfer events such as these have been shown before.

The major differences between SARS-CoV-2 and other SARS-like viruses were seen in the spike protein, where the previously mentioned mutations were found. Of six key residues in the receptor binding domain, five were different in SARS-CoV-2 when compared to SARS-CoV-1. Interestingly, these six residues are identical to those found in a pangolin coronavirus.

The second set of mutations was the insertion of amino acids between the two subunits of the spike protein. Previous research suggests that this would allow bat viruses to infect human cells. The closely related bat-derived coronavirus, RmYN02, also has amino acid inserts between the spike protein subunits, providing strong evidence that these events often occur naturally. These discoveries further discredit the idea that mutations in the SARS-CoV-2 genome were introduced in a laboratory and led to an unusual question: were pangolins the intermediate host for SARS-CoV-2?

At first, this may sound like a far-fetched theory; however, scientific evidence suggests it may be possible. Malayan pangolins illegally imported into China were found to contain coronaviruses up to 91% similar to SARS-CoV. Human-pangolin contact could have arisen by many means, as pangolin meat is considered a delicacy and the scales have been reportedly used in Chinese traditional medicine.

This, together with the discovery of the six key mutation changes in the RBD receptor supports the possibility of pangolins as the intermediate animal host. More important, even without considering pangolins as an intermediate host, this proves that the mutations found in SARS-CoV-2 could occur naturally.

There is still the issue of exactly how and where the virus transferred between animals and humans. Unfortunately, the likely period of undetected human-to-human transmission and the lack of animal and environmental samples at the proposed origin site in Wuhan make this a difficult task that is expected to remain unsolved.

While the manufacture theory deserved investigation, genetic analysis of the virus has shown that this is highly unlikely. Scientific evidence supports the Mother Nature theory, namely that SARS-CoV-2 most likely originated through zoonotic means either by direct contact, e.g. of bats with humans, or via an intermediate host. This was likely followed by a period of undetected human-to-human transmission, during which the virus could mutate and spread rapidly enough to trigger detection by medical authorities once a number of cases of severe disease arose.

Given the growing evidence showing that a significant proportion of people infected with SARS-CoV-2 remain asymptomatic, it is entirely plausible that there was a period of sustained, undetected human transmission following the first zoonotic transfer.

With such a large reservoir of animals untested, we may never find the true progenitor of SARS-CoV-2. However, the mutations it contains, and their similarities to those found in animal coronaviruses, such as bats and pangolins, certainly show that it is possible for the virus to adapt by natural selection to infect any species.

Given that this has been known since 2003, yet a spill-over was allowed to happen again (this time, with much worse consequences), one might just wonder whether humankind is clever enough to learn the lesson this time. Mother Nature will always find a way, particularly if humans choose to interact irresponsibly with the rest of the natural world.

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http://www.sun.ac.za/english/Lists/news/DispForm.aspx?ID=7553

Covid-19 “infodemic”: conspiracy theories extremely dangerous

Fake news and conspiracy theories about the COVID-19 pandemic are extremely dangerous because they erode people's trust in traditional medical institutions, scientists and healthcare workers, argues Prof Faadiel Essop from the Centre for Cardio-metabolic Research in Africa in an article published by News24 recently.

I am writing this article in defence of Modern Medicine and the Medical Sciences, after another conspiratorial video that landed in my WhatsApp inbox literally pushed me “over the edge". This time an “exclusive" video (with more than a million views) by a so-called expert, Dr Rashid Buttar, passionately spins the SARS-CoV-2 bioweapon yarn. Here Buttar makes (unproven) claims that the virus was engineered in a US laboratory and that prominent individuals such as Bill Gates and Dr Anthony Fauci form an integral part of this devious scheme.

Buttar also makes the audacious allegation that medical doctors at the frontline are also implicated as they are required to “doctor" (excuse the pun) death certificates to falsely record SARS-CoV-2 as the cause of death! Such theories are often contradictory in nature, for e.g. was the virus bioengineered in the US or China? This seems to depend on your particular worldview and/or political ideology. Other outlandish claims include that a cure is already available but currently being withheld for later profits and/or that 5G cell towers are causing the current pandemic.

Does it matter in the end whether such claims are taken seriously or not? It does indeed, as there can be serious repercussions if left unchecked. Tedors

Adhanom Ghebreyesus, the Director-General of the World Health Organization (WHO), aptly summed up the challenge when he recently stated that “We're not just fighting an epidemic; we're fighting an infodemic". He was referring to the rapid spread of fake news, much like a destructive virus would do. The harmful sequelae of such misinformation and false claims can be detrimental as witnessed by the damage to 5G cellphone towers in the UK, or when train driver Eduordo Morena attempted to crash into the US Naval Hospital Ship Mercy in Los Angeles. Morena later acknowledged that he was guilty but believed the Mercy had a different (sinister) purpose related to Covid-19 of which the public was unaware of.

In addition to such physical acts of destruction, the infodemic is also eroding trust in traditional medical institutions, scientists and healthcare workers. This is equally dangerous as such an erosion can lead to sectors of the public questioning guidelines provided by medical experts and authorities such as the WHO and others. This can easily lead to an “us" versus “them" scenario. For example, US protestors recently disregarded lockdowns and social distancing stipulations while calling for the “liberation of Michigan, Virginia and Minnesota" in order to resume economic activities in the US. This is an ongoing protest movement in the US.

The question we have to ask ourselves is: why are some sectors of the public so prone to such rash claims and conspiracies despite the abundance of hard evidence? Alarmingly, data generated by the Pew Research Center shows that almost a third of Americans actually believe that the virus was created in a laboratory. Why would someone believe a video by a so-called “expert" (with questionable credentials) that the SARS-CoV-2 is a bioweapon when there is conclusive proof to the contrary?

For example, the authors of a recent, comprehensive study published in the highly regarded Nature Medicine journal concluded that the genetic data “irrefutably show that SARS-CoV-2 is not derived from any previously used virus backbone". The authors instead propose two scenarios for its origin, i.e. natural selection in an animal host before transfer to humans, or natural selection in humans following the viral transfer from animals. In support, a group of 27 expert public health scientists recently released a statement in the

prestigious Lancet journal where they state “We stand together to strongly condemn conspiracy theories suggesting that COVID-19 does not have a natural origin". Despite clear evidence that Iran has no 5G cell phone towers and a significant burden of disease for Covid-19 in terms of morbidity and mortality, the conspiracy endures. Or the fact that a vaccine will only be ready for testing in 18 months does not deter the spread of information that secret pharmacologic cures are available but being withheld!

An excellent explanation for conspiracy-type behaviour was recently put forward by John Cook from George Mason University and Stephan Lewandowsky from the University of Bristol. In their new Conspiracy Theory Handbook, the authors propose that when there is a lack of certainty and/or the lack of clear answers to a major problem this creates fertile breeding ground for conspiracy theories to flourish as they provide a sense of control. They state that “It seems almost counterintuitive because why would imagining that this is secret conspirators in a lab generating a virus, why does that make people feel more in control? Because at least that's an explanation. And if the explanation is just random things happen in nature; people don't like randomness. We prefer to have causal explanations".

This search for causality is precisely the gap filled by those who peddle damaging conspiracies and this is constructed by removing contexts surrounding events and people, and by simplistically linking related events. For example, if Bill Gates warned about a future pandemic in a TED talk in 2015 and there is a Covid-19 pandemic in 2020 then this equates to “proof and causality" in the conspirator's worldview. Bill Gates therefore becomes part of the conspiracy. By the way, some say Nostradamus also predicted the pandemic, as did former US presidents George W. Bush and Barak Obama. Does it mean they're all involved in conspiracy of mega proportions?

Of note, the plethora of conspiracy theories currently spreading like wildfire is not unique to the Covid-19 pandemic in 2020. A similar scenario played out initially with the HIV/Aids denialism, leading to delayed treatment in South Africa (1990s and early 2000s) and a significant number of unnecessary and preventable deaths. Likewise, the Germans were blamed for unleashing a new weapon of war that caused the Spanish flu (1918-1920) with claims made that they conspired to complete this mission by entering Boston harbour with a camouflaged ship. Thus, it is up to the medical profession and medical scientists to make sure we regularly communicate with the public to provide a better sense of certainty and control. By regularly and clearly stating the facts, and by taking time to debunk related myths, such an approach should help to “inoculate" against the Covid-19 infodemic and thereby lead to informed decision-making and less clogged-up WhatsApp inboxes.

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HTTP://WWW.SUN.AC.ZA/ENGLISH/LISTS/NEWS/DISPFORM.ASPX?ID=7292

In This Section

COVID-19 shows that where there is political will there is a way to work across sectors

South Africa reported its first case of coronavirus disease 2019 (COVID-19) on 5 March 2020. In the weeks that followed the country saw decisive, strong leadership from President Cyril Ramaphosa. It has also seen significant, important and necessary co-ordination between different ministries. These have included education, justice, health, trade and industry, transport, public works and infrastructure and finance.

The rapid pace at which steps were taken was impressive. More important was the all-encompassing intersectoral approach. Ministries with different mandates and areas of focus are working in concert for a common cause.

Intersectoral action recognises that health and wellbeing is influenced by where and how people live, where they work, what transport they use, and their access to water, sanitation, economic hubs and services. Health is socially determined. To improve health, coordinated action is required between ministries that don't have health as their core mandate.

This is what "Health in All Policies" is about – a coherent approach to health policies set out by the World Health Organisation that's been adopted by a number of countries, but by no means all. Without this coordination a long and healthy life for all cannot be achieved.

COVID-19 has dramatically highlighted the need for a more integrated healthcare system.

In a letter published in the South African Medical Journal we argue that the threat that COVID-19 presents has resulted in both leadership from government and apparent willingness of all South Africans to play their part. It presents a number of opportunities that should be exploited to the full.

One stark insight is that pooling resources across the health sector is needed to address this pandemic. This includes the rational use of hospitals, high care beds and laboratory testing capability.

Exemption to help co-ordination

The trend for pooling resources is being encouraged by South Africa's Competition Commission, which published a COVID-19 block exemption for the healthcare sector.

The exemption seeks to promote co-ordination, sharing of information and standardisation of practice across the entire healthcare sector. The aim is to facilitate cost reduction measures, allowing possible procurement efficiency in purchasing of diagnostic tests, treatment and other preventive measures.

In particular the exemption seeks to promote agreement between the national department of health and the private sector to make facilities available to the public sector. For example, if government wants to use private sector bed capacity it may be able to use its drug related single exit price experience to negotiate the cost.

The makings of a roadmap

Late last year South Africa released a Health Market Inquiry report. It found excessive use of private health care; more care was delivered than could be explained by the level of illness of the private sector population.

The report also found that the sector would benefit from better regulation.

It made a number of recommendations that promote standardisation and knowledge-sharing as well as a method to deal with pricing within the functions of the proposed supply-side regulator.

The supply-side regulator includes systems which would allow for a real time description of:

- providers – which ones exist and where they're operating
- where beds are located, their purpose (medical or surgical) and level of care (general, high care or intensive care), and
- information on utilisation rates.

The report set out how the regulator could rationalise various functions which are currently poorly coordinated or absent across the private and public sector.

The report emphasised that the efficiency of, and access to, care required having information about health sector capability and quality across the entire health sector. This would enable resources to be used rationally.

The COVID-19 pandemic has underscored that such an approach is essential.

Set up this way, the regulator would form an essential mechanism going forward to ensure that South Africa was prepared for possible future emergencies.

Learning from COVID-19

There are two lessons here. For the health sector the need for more coherent integration is undeniable. Perhaps this exemption and working together to protect South Africa from the effects of this pandemic can build trust between players and will ease South Africans into a more rational and integrated healthcare system.

The second lesson is about intersectoral action and Health in all Policies that South Africa has seen illustrated to mitigate the threat of COVID-19. Poverty,

inequality and unemployment similarly threaten the wellbeing of individuals in South Africa.

Equally urgent is the need to develop a mindset that understands that all policies aimed at development require integrated action. This means involving a range of players across government departments, across the public private divide, and must include social mobilisation and engagement with communities. The response to COVID-19 illustrates this well.

South Africa has managed to do this for health. It must be possible to do it in other areas of public policy. This needs to be extended further to build a more equal South Africa.

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HTTPS://THECONVERSATION.COM/COVID-19-SHOWS-THAT-WHERE-THERE-IS-POLITICAL-WILL-THERE-IS-A-WAY-TO-WORK-ACROSS-SECTORS-134999

Social science shows it can contribute to COVID-19 policy-making

In recent weeks, University World News has published a number of articles about universities and their responses to the COVID-19 pandemic. These included an article on the multiple and the many-faceted contributions by the 16 members of the African Research Universities Alliance (ARUA).

Another article reported that leading South African social scientists are calling for greater participation by social scientists in shaping the mitigation policies being produced by the government to manage the spread of the COVID-19 virus.

And an earlier article in 2018 reported on the Sixth African Higher Education Week held in Nairobi, where the South African Minister of International Relations and Cooperation Naledi Pandor, then minister of higher education, argued that African universities should be empowered to build on their research capacity to wield influence on the continent for evidence-based policy-making and implementation.

Contested and controversial terrain

Policy-making in Africa and everywhere in the world, as the pandemic shows, is a controversial and contested terrain. There is a constant tension between government officials (responsible for policy drafting and implementation) and policy advice.

In Africa in particular, there is a thriving industry of politically connected consultants and academic experts who, like the consultants, are trying to advance their reputations or to line their pockets. And then there are cases where bureaucrats try to write and implement policy, usually with disastrous consequences.

All of this makes it clear that a particular aspect of policy-making that the COVID-19 pandemic has highlighted is the role of science, and the tension between evidence-based policy and policy driven by political interest groups.

We will ignore the pseudo-science of the president with a nuclear arsenal who suggested that people inject themselves with bleach. The counter to Trump, and a magical plant from Madagascar, is evidence-based policy, which is far more complicated than reading policy off empirical evidence.

Åse Gornitzka commented that in modern bureaucracies, scientific information enters a crowded and contested space with competing claims from interest groups, practical experience and common-sense wisdom.

Erik Albæk observed that just a few years after evaluation and policy research took many corridors of power and administration by storm during the 1970s, it became depressingly clear that one could only rarely – and with difficulty – prove that research had exerted any specific influence or had any beneficial effect on the policy that was implemented.

A recent University World News article highlighted that in South Africa, against a backdrop of a ministerial advisory committee comprised solely of medical experts, leading social scientists were calling for greater involvement in shaping government's mitigation policies drafted to manage the spread of the COVID-19 virus.

This is not to understate the fact that South Africa has been 'blessed' with such a medical expert group because it is highly qualified to respond to a pandemic. By comparison with the shambolic responses to COVID-19 in so-called 'first world' countries, such as Italy, Britain and particularly the United States, South Africa has received international praise for its response, including from the World Health Organization and the United Nations.

Although there may not be any social scientists on the main advisory committee, in the second half of 2019 President Cyril Ramaphosa serendipitously convened a Presidential Economic Advisory Council (PEAC), a group

of 19 national and international social scientists (mostly economists) to advise him.

In his first state of the nation address, the president committed to establishing such a council to "ensure greater coherence and consistency in the implementation of economic policy and ensure that we are better equipped to respond to changing economic circumstances". The presidency has been able to draw on this council when deliberating its response to the pandemic.

Increase in child support grant

With the PEAC, as with the medical sciences, there is a strong quantitative social science base to draw on. A group of economists, led by the Southern Africa Labour and Development Research Unit (SALDRU) at the University of Cape Town, made a major input to the announcement of an increase in the child grant. This announcement was part of the government's US$30 billion plan to boost the economy and relieve the social distress caused by the lockdown to prevent the spread of COVID-19 infections.

The Daily Maverick reported that the increase in the child grant 'corresponded' with a proposal from SALDRU, which was supported by the C19 People's Coalition, based at the Institute for Poverty, Land and Agrarian Studies at the University of the Western Cape. It argued that this was the most far-reaching, pro-poor and pro-women mechanism to compensate for the massive loss of household incomes.

This 'correspondence' did not happen by accident. There has been a history of engagement with strong research groups like SALDRU and the government in evidence-informed policy-making, which intensified during and after the compilation of the National Development Plan (2011).

The strength of SALDRU is its use of survey data to analyse poverty, inequality and labour markets. Its first major public presence was during the 1984 Carnegie Inquiry into poverty. The inquiry produced more than 300 papers and made some academics household names, such as Francis Wilson and Mamphela Ramphele, who provided an unshakeable evidence base of the disastrous realities of apartheid South Africa.

Inclusivity

The processes around the initial policy response to COVID-19 contrast sharply to this apartheid-era marshalling of evidence in opposition to government policy. In the case of COVID-19, the presidency and those working for the presidency, in preparing policy responses, convened an inclusive process to leverage available research strength to work on aspects of the socio-economic response, including labour market support measures. The members of the PEAC were centrally articulated into these engagements.

In effect, a very strong research platform was convened. Despite quite different ideological orientations, each team brought analysis to the table where it was tested and honed. As a consequence, the presidency emerged with a stress-tested evidence base on which to base their policy recommendations to be fed into its formal engagements with the COVID-19 National Command Council.

The SALDRU group worked on aspects of the socio-economic response, including labour market support measures under Dr Kate Philip who had been formally tasked with developing a proposal for the presidency about informal workers. Most of the labour market support measures were macroeconomic or focused on firms and their formally contracted and represented employees.

There was great concern about the lack of any support for the vulnerable informal workers working in either the formal or informal sectors. These workers are administratively invisible in the tax and labour market systems (for example, the Unemployment Insurance Fund) that are used as the key mechanisms to deliver emergency relief to workers.
The team set to work with good data and good research skills. They were able to show that in South Africa (and in Ghana, Kenya and almost any African context), these informal workers are among the lowest earners in the labour market and that they come from very poor and vulnerable households that depend heavily on low earnings. For most of these workers, South Africa's lockdown meant an abrupt end to their income.

The team explored the consequences and possible instruments to provide the necessary support to informal workers during this crisis. A case was made for emergency relief to be provided through a top-up to the Child Support Grant.

The proposed grant was a means-tested transfer of ZAR440 (US$24.8) per month, to be paid to the primary caregiver for each qualifying child under 18. There would be 12.5 million beneficiaries, the proposed grant was to be small – well below South Africa's poverty lines – and was not explicitly targeted at informal workers.

Despite this, the research was able to show that a top-up of the Child Support Grant would reach substantial percentages of very vulnerable informal workers either directly or, more likely, through other members of their households who were grant recipients. Moreover, this would make a substantial contribution to ameliorate the shock to their pre-lockdown household incomes and would dampen the disastrous poverty consequences of the lockdown.

Survey data and international linkages

Key to the work of SALDRU is the availability of survey data, provided mainly by Statistics South Africa (Stats SA), a statutory body that produces household, labour market and health data, which is made public. A second source of data is DataFirst, which is a data service dedicated to providing access to research data from South Africa and other African countries. It also develops the data skills among prospective users.

An important additional component is the University of Cape Town's Training Programme in Social Science Research Using Survey Data that SALDRU has run since 1999. Close to 2,000 participants from civil society, South African universities and government have participated in this course. It is not a fee-paying course; the costs of this investment in South Africa's quantitative research capacity are borne by the Kresge Foundation and other donors.

There are now other training programmes of this kind, and such training is becoming embedded in the graduate training curricula of many South African universities.

An important development during the last decade has been SALDRU's growth in linkages with international monitoring and evaluation groups. One such group is the World Inequality Lab at the Paris School of Economics (with Thomas Piketty) and J-PAL.

J-PAL Africa, based at SALDRU, is perhaps the closest that social science comes to the traditional scientific method by conducting randomised evaluations of, for example, the 'teaching at the right level' approach in primary education. Their stated purpose is to build partnerships for evidence-informed policy-making, but they also work in other sectors such as labour markets, urban services and political participation.

In 2019, the co-founders were jointly awarded the 2019 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel. The prize was awarded "for their experimental approach to alleviating global poverty".

Lessons

An important lesson from the child grant example is the policy 'triangle' between national planning in government, an independent statutory body (Stats SA) and an expert academic research unit (SALDRU), where expertise is not simply a matter of highly rated individual researchers, but based on collaboration with world leaders in the field.

The second point is that it was not individual consultancy, neither from the private sector nor academia, that led to an eventual increase in the child grant. Individuals can play an important role in scrutinising and evaluating policy proposals, but they cannot compete or contribute much to policy formulation in the modern era of longitudinal big data.

Third, despite the destructive Zuma years in South Africa, the foundations for impact were in place: there remained sufficient channels of engagement and goodwill from policy officials who had not given up the fight, and who continued to work with and even nurture the connections with researchers. What SALDRU was able to do was to rely on its enduring interaction with government, as part of a wider expert network, and to seize on the COVID-19 crisis when politicians were in desperate need of legitimacy.

Fourth, universities cannot do it alone. There must be networks of cooperation and interaction. For this to happen, governments in Africa have to join these networks, wean themselves from their favourite consultants and disabuse themselves of the idea that they can do it by themselves.

Pandor argued that African universities should be empowered to build on their research capacity to influence evidence-based policy-making. The example of SALDRU shows that the continent has research universities that can do this.

In this regard it is worth referring back to ARUA and noting that SALDRU hosts one of the alliance's 13 centres of excellence, the African Centre of Excellence for Inequality Research. The bigger issue is how to expand this capacity.

A proposed €1 billion (US$1.1 billion) per annum for a collaboration between African and European research universities that will work on the profound demographic, social and environmental challenges facing both continents seems an important step in the right direction.

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Unprecedented tax collapse endangers post-Covid recovery

The consequence of near-total cessation of economic activity and then a somewhat haphazard partial opening up of the economy is wreaking havoc with South Africa's tax base.

The serious economic impact of the lockdown policy response to the Covid-19 pandemic has understandably generated substantial policy debate in the media and in academia. Conspicuously absent from most of these discussions is an acknowledgement of an imminent tax collapse, which is not only unprecedented in modern South African fiscal history, but also poses huge economic challenges for the country.

In a report to Parliament on 5 May 2020, Edward Kieswetter, the commissioner of the South Africa Revenue Services (SARS), estimates that revenue losses of 15 to 20% of tax revenue are anticipated, amounting to R285-billion in fiscal year 2020/21. This is roughly in line with forecasts by the Bureau of Economic Research of R280-billion.

Given the highly uncertain nature of the trajectory of the pandemic (with the Department of Health expecting the infection rate to peak only in September) and the duration and nature of the risk-adjusted lockdown, this tax loss estimate could very well be a material understatement, with actual losses approaching R300-billion or more.

Much debate has focussed on the finance requirement of a comprehensive Covid-19 response package. Regrettably, many of the contributions to this debate have completely ignored the additional financing requirement consequent to the tax collapse, as well as the unfunded revenue requirements carried over from previous years, which will further swell the deficit and debt to GDP ratio, and render a fiscal trajectory which was already unsustainable pre-Covid-19 even more so.

The longer the lockdown continues in its present form, or by way of a possible reintroduction, the greater the negative impact on the tax system and the greater probability of drawing down government cash balances, a debt standstill and resorting to month-by-month cash rationing in a worst-case scenario.

At the end of February 2020, National Treasury reported that cash balances stood at R304.5-billion. These comprise sterilisation deposits held at the SARB and other cash balances on the public sector balance sheet, which could be drawn down as bridging finance.

The prime objective of South Africa's coronavirus response must be to manage infections and save lives by preventing the public health system from being overwhelmed. But the consequence of near-total cessation of economic activity and then a somewhat haphazard partial opening up of the economy is wreaking havoc with South Africa's tax base.

A heated controversy had centred on whether South Africa would compromise its sovereignty by acceding to IMF conditionality on its loans. The sort of facilities for which South Africa has applied are not contingent on particularly onerous conditionalities. Whatever the merits of such a source of finance, the heart of a country's sovereignty lies in its tax base. Unlike many other developing countries dependent on donor funds, South Africa has had a fairly robust and resilient, diversified (albeit shrinking) tax base on which to draw. Tax proceeds are critical for financing the progressive realisation of socio-economic rights and sustained levels of social relief. These are the unfulfilled promises of the transformative constitutional project.

The Covid-19 public health response highlights the shameful fact that the right to water and food, enshrined in the Bill of Rights, holds far too little of substance for the vast majority of the population. The coronavirus pandemic and the lockdown response did not cause poverty and inequality, but it will amplify it further, as jobs and livelihoods are destroyed.

The disgraceful neglect in overcoming the problem of apartheid spatial geography has meant that any lockdown is unlikely to be effective over a sustained period, with the majority of the country living in crowded, insalubrious conditions of a kind that, for all too many, have changed little in the 26 years of democracy.

As the fiscus becomes more and more dependent on borrowing at the risk-premium driven high interest rates required to compensate foreign investors to invest in South Africa's junk bonds, the proportion of interest spending in the Budget will escalate sharply, crowding out social expenditure and infrastructure investment. In turn, this will make it even more difficult to vindicate the promises contained in the Constitution.

South Africa's system of multi-level government (national, provincial and local) and its complex intergovernmental fiscal system and medium-term expenditure framework depends crucially on revenue certainty for municipalities and provincial governments. This, in turn, is predicated on a stable fiscal framework, which is ultimately based on the ability of SARS to mobilise the necessary revenue. Any contraction of the tax base has immediate consequences for many fiscally distressed municipal and provincial governments, which have already borne the brunt of fiscal adjustment to finance the profligacy of captured state-owned entities in the Zuma era.

Judging the impact of the pandemic on the economy – and by extension on the tax system – is by no means easy. For the first time, the South African economy has been hit by real supply and demand shocks originating both domestically and from the external disruption of supply chains in the global economy. There is a very real danger that these shocks to the economy will transmute into a devastating financial crisis at a time when the South African economy has already been bedevilled by a significant secular decline in potential output growth over the last decade, on top of an existing unemployment crisis (particularly among the youth), abject poverty and obscene inequality.

Given the cross-sector impact on value chains, the full impact on the tax system is difficult to foresee. Certain industries like tourism and the hospitality industries are likely to be decimated so long as the coronavirus poses a threat. But other sectors of the economy may well be more resilient; eg, agriculture with exceptionally good yields in maize and citrus this year, and other sectors that benefit from buoyant prices (such as palladium and rhodium), low oil prices, and strong demand for electronic commerce.

There has been considerable disagreement as to whether the South African economy is likely to see a quick rebound in 2021 (the so called V-shaped recovery) or whether a more protracted malaise is likely (the U-shaped recovery). With every day of lockdown, the probability of a V-shaped recovery recedes further, as the short-term cash flow problems of companies which may be a symptom of illiquidity, crystalise into insolvencies and permanent job losses. What might have been a temporary shock could well become a permanent loss of output potential. And it must be recalled that the economy hardly entered the Covid-19 pandemic in rude health.

In some cases, tax relief extended to companies will simply defer revenue to the next financial year, a timing issue displacing income into the next financial year. But in other cases, where companies are fortunate enough to survive, they will be able to carry forward their assessed tax losses for many years, drastically reducing revenue flows into the fiscus. Here the trajectory of corporate income tax after the global financial crisis is instructive: it took a decade for corporate income tax proceeds to recover to their pre-crisis levels. Over this period, personal income tax took up much of the slack. But with the pandemic and its response cutting a swathe through employment and livelihood prospects, this is unlikely to recur.

Public discourse on the immediate responses to the pandemic's economic impact centre on borrowing, reprioritising spending, drawing down cash reserves, lowering interest rates, credit guarantee schemes and judicious application of the South African Reserve Bank's balance sheet. Whatever their merits, these, however, can only be short-term responses at best. In the medium term, the tax system can be the only sustainable bedrock for post-Covid-19 reconstruction and a shift to a more inclusive, employment creating, climate-friendly recovery trajectory.

Inclusive growth is the only way South African can dig itself out of this economic hole. And that means an end to economic shibboleths, loved by the populists of both right and left. It means looking beyond the binaries of lockdown or no lockdown, lives or livelihoods, and the total control or libertarian approaches. What is required is a policy that can ensure that those sectors of the economy that can operate successfully, even with the threat of the virus, be promoted (with appropriate risk mitigation measures) and new job-creating sectors such as the green economy be encouraged now.

To delay can only mean even more rapid economic decline, a frightening collapse of the tax base and an inability to support the millions who from day to day are living desperately vulnerable lives.

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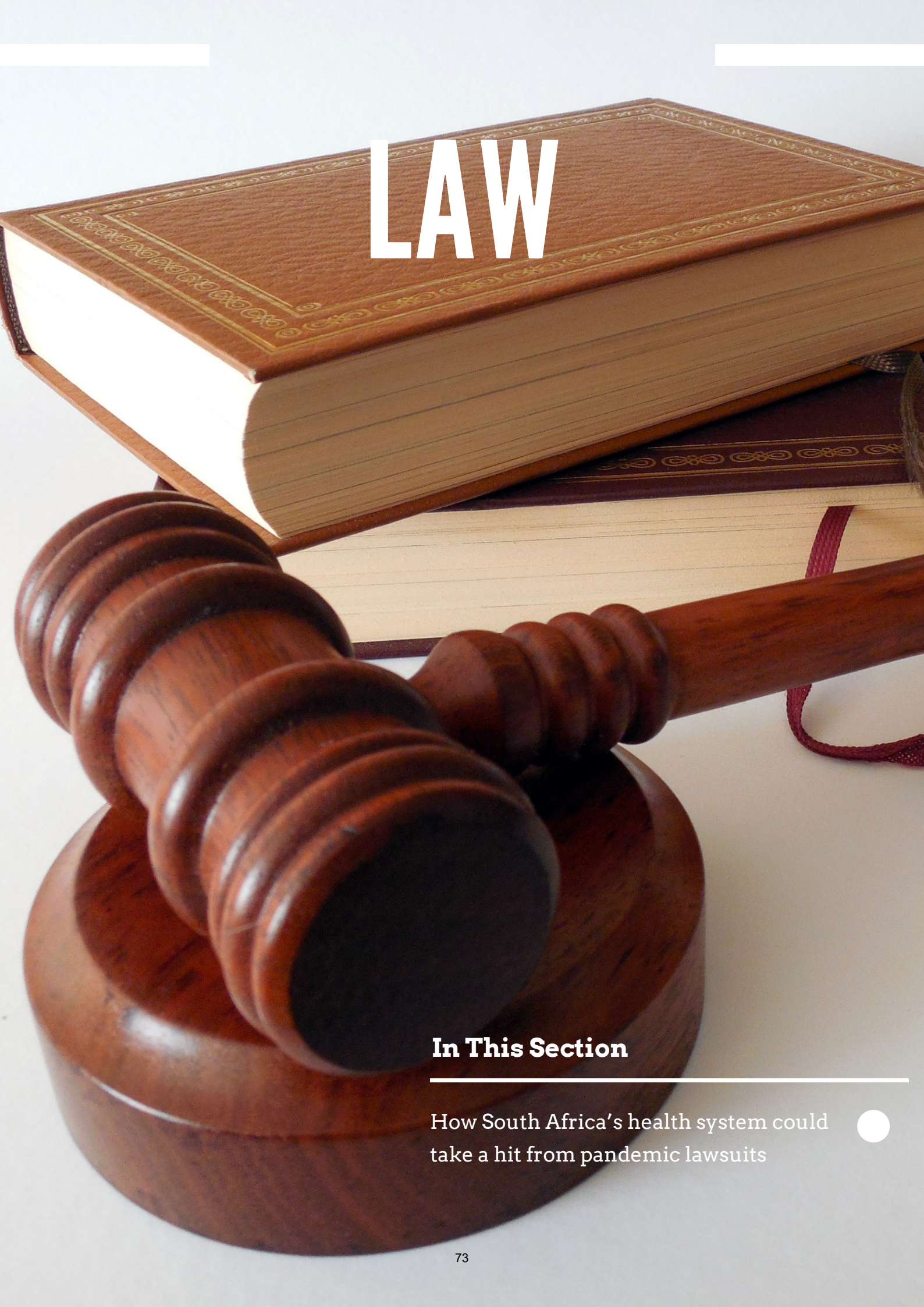

In This Section

How South Africa's health system could take a hit from pandemic lawsuits

As the COVID-19 pandemic spreads around the world, there's been an outpouring of gratitude and support for healthcare professionals. Communities have made extraordinary efforts to support them. These include ensuring they have protective personal equipment, meals and priority access in supermarkets. They've been given a break from indemnity payments and will most likely be prioritised for critical care and ventilators if they get sick themselves. That's because they are risking their lives to save others. By the beginning of May, it was estimated that more than 1,000 healthcare workers from 64 different countries had died.

Civil society's goodwill towards the health profession is justified. But how long will it last?

Doctors and hospitals have to make difficult decisions when treating COVID-19 patients. These include withdrawing patients from ventilators. And patients with other conditions might suffer because care was unavoidably diverted to COVID-19. It's possible that patients or their families could litigate.

In South Africa, the health profession has been operating in a highly litigious context over the past decade. One of the reasons is a growing awareness of patient rights. That's coupled with aggressive marketing by personal injury lawyers eager to capitalise on this awareness.

It's a concern for private and public hospitals, indemnity insurers and civil society because when doctors are preoccupied about future litigation over decisions they are forced to make during the pandemic, they will be forced to practise defensive medicine. Some were already doing so before COVID-19 – and it inflates the cost of healthcare.

Based on malpractice claims, costs for indemnity insurance cover have spiralled. This has forced many specialists to reduce their scope of practice or increase their consultation fees. For example, many doctors who qualified as obstetricians and gynaecologists no longer practise obstetrics because of exorbitant indemnity cover and claims in this field of practice. Such claims are considerably higher than other fields of work; one reason is the lifetime costs of caring for a person who was disabled at birth.

This vicious cycle of litigation claims, and more expensive service is having a negative impact on health service delivery. For one thing, spiralling claims in the public health sector mean the health budget is spent on settling legal claims instead of on healthcare.

It's possible that the huge pressures on the health system created by the COVID-19 pandemic could make the situation even worse. As patient numbers increase, ratios of staff to patients will worsen, as they have globally, which could affect quality of care, despite the best efforts of highly competent healthcare professionals. Infection of hospital staff, fatigue and moral distress related to the pandemic will also have an impact on service delivery.

Why are doctors concerned?

If the number of cases increases substantially, specialists such as paediatricians, dermatologists or surgeons would have to work in emergency medicine or critical care. Retired doctors and nurses are encouraged to assist frontline healthcare professionals. Doctors without current re-registration status with professional bodies are allowed to continue practising for now.

But if there's a claim of negligence because of what they did or failed to do in these unusual circumstances, what standard would be used to judge them?

The public health response to the COVID-19 pandemic requires some extraordinary measures. Professional bodies globally, including the Health Professions Council of South Africa, have recognised this. They have issued updated guidance on practising outside one's profession, telemedicine, and registration extensions.

The greatest concern for healthcare professionals working in critical care is the need to withdraw ventilation because there aren't enough ventilators available. The country's constitution says a person's rights – such as access to healthcare – can be limited. And withdrawal of care is accepted by the Health Professions Council of South Africa as indicated in its published guidance. But withholding or withdrawing treatment refers to futile care. During COVID-19 care, futility might not be the reason patients are removed from a ventilator. It might rather be deterioration in their condition while other patients with a better prognosis need intensive care. The guideline is therefore not entirely applicable in a COVID-19 pandemic context.

Protecting health professionals

The New York state governor issued directives to provide temporary immunity from civil liability for injury and death as a result of an act or omission during the pandemic for a limited period. In the UK, the British Medical Association issued guidance, but this has been met with legal challenges.

The South African Health Professions Council acknowledges that its response to complaints from the public will "consider the extraordinary circumstances in which practitioners are working and the heavy demands on them during this period". The council's mandate is to serve the profession and protect the public.

But Parliament has remained silent on any form of temporary legal indemnity for healthcare professionals in

South Africa. Gross negligence in healthcare will not be excused under any circumstances. But we think standards for reasonableness will certainly not be the same as in pre-COVID-19 times.

National guidance (still awaited) on allocation of scarce resources, when developed, might protect healthcare professionals working in the public sector. It's not known whether private sector doctors and independent practitioners will be included.

It's also not clear how the legal and professional systems in South Africa will make provision for negligence claims and complaints that arise out of retired doctors and nurses returning to work in the pandemic or doctors working outside of their medical specialisation. This is a legal hiatus that needs to be addressed urgently.

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https://theconversation.com/how-south-africas-health-system-could-take-a-hit-from-pandemic-lawsuits-138733

In This Section

COVID-19 shows that where there is political will there is a way to work across sectors

Social science shows it can contribute to COVID-19 policy-making

Unprecedented tax collapse endangers post-Covid recovery

Is the lockdown authoritarian creep or 'proportionate response'?

Covid-19 has once again revealed that South African society is deeply divided: The middle class who want the opening of the economy and an end to authoritarian restrictions on their personal liberties; and the poor who want jobs, grants and additional welfare state interventions to support their precarious lives.

Greg Mills and Ray Hartley's Daily Maverick account of lockdown South African style, "An iron curtain is falling on our freedom", implies that Covid-19 measures could signal the start of a slide into totalitarianism along the lines of the former East Germany (the German Democratic Republic or GDR).

The writers, who are both based at the economic think tank The Brenthurst Foundation, portray a scenario whereby President Cyril Ramaphosa's initially sober and sensible approach to the pandemic is rapidly unravelling and morphing into authoritarianism.

Mills and Hartley are correct to draw attention to the fact that "more than 100 charges have been laid against the police for abuses during the first three weeks of lockdown". They are also right to highlight the untenable human rights violations by the SANDF in enforcing lockdown measures.

However, it would seem that the main target of their attack are a series of measures that include restrictions on social and economic activity, such as the purchasing of tobacco and alcohol, and the 8pm to 5am curfew that, they claim, was introduced "without a scientific justification other than to control".

They also claim that this "impulse for social control was further exposed by the ruling that exercise – walking, running, and cycling – would be permitted for only three hours a day from 6am to 9am". These measures, they argue, reveal the ANC government's totalitarian tendencies, which are seen to draw inspiration from the GDR's state-controlled economy and its notorious Ministry for State Security, known as Stasi. So, how did we get from the initial widespread support and praise for the Ramaphosa administration's handling of the Covid-19 crisis to comparisons with Stasi?

A brief scan of responses to the Mills and Hartley article reveals that these kinds of perceptions are widespread among the chattering classes in the middle-class suburbs.

Examples include JG's comment:

"Ahh, the Orwellian National Command Center. It's not about tobacco, alcohol, hot food, exercising, dog walking, it's about the assault on people's freedoms. It's about the state's attitude that they know what's best for the people. Little wonder given that the aging cabinet consists in large part of people who were brought up on the Soviet twaddle of the 70s and 80s during the struggle years."

According to FvK:

"Absurd, contradictory and unnecessary regulations abound… 70,000 troops on the ground armed with automatic weapons of war. An 8pm to 5am curfew that cannot be justified. The rule of law undermined on a daily basis as troops and police punishing alleged transgressors without the benefit of a court hearing. The slogan 'we are all in it together' now a farce. It seems the authors of the article have it spot on."

BC writes:

"Let's be honest, the ANC have been chomping at the bit for years to impose a dictatorship. It's the only possible way to extend their power grab".

And finally, EO:

"Good gracious me! Did these two guys seriously compare the state of the current level 4 lockdown to the German Democratic Republic. When I started reading this article, I thought it was meant to be a joke, but it increasingly becomes clear that it is not."

It does indeed seem strange to compare South Africa's lockdown with the GDR's Stasi. Surely such extreme public health measures are, on the whole, justified given the seriousness of Covid-19 and the fact that South Africa has millions of immune-compromised citizens, including 7.7 million living with Aids and more than 400,000 TB infections each year, including 20,000 cases of drug-resistant TB? This is a particularly serious health threat given that TB is a respiratory disease much like Covid-19. Other high-risk conditions include malnutrition and stunting, and chronic conditions such as obesity, hypertension, diabetes, and asthma.

Mills and Hartley may be correct to point out that "the United Nations has gone as far as to name South Africa as one of the countries abusing the lockdown with gratuitous violence", but what they fail to mention is that the minister of defence publicly apologised for the death of Collins Khoza at the hands of SANDF members enforcing the lockdown in Alexandra.

The government also seems to have backed off from its initial plans to "decant" and "de-densify" informal settlement "hot spots" to facilitate social distancing. The City of Cape Town has also decided to close down a temporary shelter for 3,000 homeless people at Strandfontein sports complex following NGO and activist calls for its closure on human rights and health grounds. It remains to be seen whether the government will heed the concerns of human rights lawyers and

NGOs about the role of the 73,000 soldiers to be deployed during the lockdown.

While coercive policing and "quarantine camps" for homeless people and refugees are indeed problematic and ought to be challenged, surely restrictions on exercise and the purchase of cigarettes and alcohol are not signs of a police state in the making? Yet, reading some social media commentary one would think that we are already living in a Stasi-style state.

Such alarmist perspectives are perhaps to be expected from conservative whites locked down in the suburbs. This section of South African society lives in a bourgeois bubble where restrictions on their liberties (ie, to exercise, cycle and walk their dogs) are increasingly being perceived as signs of totalitarianism, even if these are motivated by legitimate public health concerns to protect the vulnerable from a deadly disease. These "libertarians" also typically have very little understanding or empathy for the plight of the poor and marginalised, who now more than ever urgently need any protection they can get from the government.

Concerns about authoritarian creep are not only emanating from the conservative and libertarian camps. It appears that some progressive citizens are also worried. For instance, on 27 April 2020 there was an animated Facebook discussion by some former anti-apartheid activists in response to concerns that Level 4 could usher in restrictions on exercise for those 60 years or older.

As a veteran anti-apartheid activist put it:

"I sense that we are slipping into a very undemocratic and authoritarian space that I am well primed to detect as soon as it raises its head… I agree with those who feel we are going too far. More draconian than we need to be. Read a fascinating paper written by the Director of the body that handled the Ebola Crisis. Biggest lesson learnt is worth quoting: 'government cannot force policies down the throat of people even when it may be for their own good'."

While some of the lockdown restrictions certainly require rethinking and reformulation, these measures are surely not signs of totalitarian tendencies?

Given South Africa's authoritarian past, one could perhaps expect kneejerk pushback against some of these measures. Moreover, there are indeed precedents throughout the world where crises and states of emergency have been used to clamp down on citizen rights and freedoms.

In fact, on 26 February 2020, during the height of the Italian Covid-19 crisis, the Italian philosopher Giorgio Agamben wrote a provocative article claiming that lockdown measures in Italy were "frantic, irrational and absolutely unnecessary", and were merely an opportunity for the government to use fear and panic to introduce a state of emergency and thereby suspend freedoms, all in the name of basic biological survival, or what he calls "bare life".

A more plausible claim has been made in relation to how the US "War on Terror" after "9/11" resulted in the establishment of a massive Homeland Security surveillance apparatus that has remained in place since. Similarly, with the outbreak of Covid-19, countries such as China were able to extend their mass surveillance systems, and Hungary's Prime Minister Viktor Orban used Covid-19 to further restrict freedom of expression and postpone elections. But to compare the lockdown measures of the Ramaphosa administration with these cases of authoritarian creep seems both inaccurate and alarmist.

Stellenbosch University's Professor Keymanthri Moodley and colleagues recently published an article in the South African Medical Journal in which they ask whether South Africa's Covid-19 responses can be seen to be "draconian measures" or a "proportional response"?

The authors conclude that for quarantine and containment strategies to be legitimate and effective in public health emergencies, they need to be both legally and ethically justifiable, and implemented with "compassion, restraint and respect for human rights". They also note that, for such measures to have "democratic legitimacy", they need to be compatible with South Africa's Bill of Rights, which protects "human dignity, equality and freedom in an open and democratic society".

There clearly needs to be a delicate balance between measures required to contain the spread of the virus and respect for democratic rights. As Steven Friedman has noted, a "listening government" needs to create a balance between expert and state-driven disease control measures and co-operation with citizens and their needs.

A recent study by Professor Pricilla Reddy of the Human Sciences Research Council (HSRC) found that the majority of citizens claimed that they were complying with Covid-19 regulations. Such surveys are of course very problematic because they rely on what people say they do, rather than what they actually do. Another attitude study by Victory Research reported that support for the lockdown had dropped from 77% when the measures were first announced to 30% by the end of the April. Regardless of the accuracy of these findings, it seems clear that questions of democratic legitimacy will continue to loom large as the lockdown measures unfold.

While the R500-billion rescue package and the phased opening up of the economy may be able to sustain the legitimacy of these measures, what is becoming increasingly clear is that Covid-19 has once again revealed that South African society is deeply divided.

It is not surprising that South Africa is once again being described as a country of two nations: the middle class who are relatively secure and comfortable behind their high walls, and who are now pushing for the opening of the economy and the cessation of authoritarian restrictions on their personal liberties; and the poor in the townships and informal settlements for whom the problem is not authoritarianism, but jobs, grants and

additional welfare-state interventions to support their precarious lives.
Only very recently, the World Health Organisation (WHO) and South Africans across the spectrum praised the government for its responsible and effective responses to the devastating Covid-19 threat. Government's responses may not be perfect, but they are a far cry from a descent into authoritarian rule.

As the country moves towards the eye of the Covid-19 storm, now expected to arrive in July, we need to think more deeply about the government's obligation to protect the poor and the vulnerable, even if this means temporary sacrifices of individual liberties.

It is not going to be easy for a government to balance individual liberties with the needs of the economy and public health. It will require both a "listening government" and citizens who are prepared to make sacrifices to protect millions of vulnerable South Africans.

This has nothing to do with the spectre of the Stasi or Stalin; it is about the basic decency that Albert Camus wrote about in his 1947 novel, The Plague.

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HTTP://WWW.SUN.AC.ZA/ENGLISH/LISTS/NEWS/DISPFORM.ASPX?ID=7326

The Strandfontein relocation camp highlights how the rights of the homeless are being violated

It is unacceptable that an already vulnerable and historically silenced group on the margins of society have once again had their rights violated as happened at Strandfontein — this time in the middle of a global health pandemic.

The homeless have always been a particularly vulnerable group in South Africa and across the world. The Covid-19 pandemic has further highlighted this vulnerability, especially in the intersection between disease outbreaks and homelessness. As noted by Leilani Farha, given that housing has become one of the main defences against the virus, being homeless during Covid-19 is potentially a death sentence. Consequently, the United Nations has appealed to countries to urgently address the housing needs of the homeless to ensure they are also protected from the virus.

In this regard, governments are advised to provide accommodation to all homeless people and to ensure that this accommodation makes provision for social distancing, self-isolation and quarantine. Additionally, access to water, sanitation, food, health services and Covid-19 testing must be ensured. Forced evictions and demolishing of "encampments" should also be prohibited and it should be ensured that the homeless are not criminalised or punished in any way when enforcing any of the regulations, for example, curfews. But what has South Africa's response been in the context of the homeless?

The South African government has implemented various measures in response to the pandemic. This includes a nationwide lockdown in which everyone is required to stay at home, exercise social distancing and ensure regular handwashing. These measures are extremely difficult to implement for those who do not have a home or for those living in informal settlements where houses are closely packed together and there may not be access to running water to wash hands regularly.

On this basis, Regulation 11D(2) of the National Disaster Management Act 57 of 2002 compelled the state to identify temporary shelters, quarantine sites and self-isolation sites for homeless people, in line with health protocols. This results in relocations of homeless people, and it becomes important to understand what the law prescribes in relation to relocations, especially given the historical negativity that surrounds them.

Guiding principles for relocations of informal settlements

Guiding principles on relocations, which would also apply during a global pandemic, can be derived from various policies and programmes. Ordinarily, the affected household/community must consent to the relocation and its terms and conditions. The process should try to minimise disruptions as far as possible and the area to which those affected are relocated should have proper shelter and municipal services such as running water and sewerage.

Municipalities should provide relocation assistance to those being relocated. Importantly, relocations should be undertaken on a voluntary and co-operative basis with cognisance taken of the right to dignity of those affected.

A relocation strategy should be developed in collaboration with affected parties. In this regard, meaningful engagement with those affected is of extreme importance, both before and after the relocation. Moreover, engagement should be conducted in good faith with a willingness to listen to the concerns of those affected, and the engagement should be open and transparent with proper record keeping.

While these guiding principles are of utmost importance, it is concerning that there have been some reports of alleged violations of rights including human dignity, health, and privacy during Covid-19. Although there have been numerous reports of similar violations of rights prior to this pandemic, these alleged violations have occurred specifically in relation to attempts by government to relocate people to temporary shelters – a measure that should protect the homeless, not expose them to further harm. These allegations have been made by health workers, civil society members and by some of those who've been relocated to quarantine sites.

Some issues were raised in Cape Town's Strandfontein Sports Ground site, where approximately 2,000 homeless people were relocated during the lockdown. At this site, a number of incidents were reported, including:

Lack of proper social distancing;

Inadequate healthcare access;

Lack of food, water, and ablution facilities; and
Allegations of sexual assaults.

Additionally, there have been allegations of people being "dumped" in shelters without proper consultation processes and access to information. It was reported that conditions were so appalling, that the South African Human Rights Commission recommended the site be closed immediately.

Over and above the fact that the Strandfontein site contravenes the UN guidelines, regulations, and the guiding principles for relocation, it is concerning that the government failed to facilitate proper meaningful engagement, especially given how disruptive the relocation process was.

While this is only one example, it is unclear how many other sites had similar conditions and how many relocation processes failed to ensure the involvement of those affected. It is unacceptable that an already vulnerable and historically silenced group on the margins of society have once again had their rights violated — this time in the middle of a global health pandemic.

Adhering to the guiding principles of relocation during pandemics

The principles regarding the constitutionally sound relocation of homeless people centre on meaningful engagement and a voluntary and transparent process being followed. These principles were not suspended during the lockdown and should still have been (and should be in future) followed by the state. The Strandfontein example shows how devastating human rights violations can be if the guiding principles set out above are not adhered to.

Ultimately, even though more urgency and haste are required when organising relocations during a state of disaster, the approach embodied in these principles is in line with the right to human dignity, access to information as well as rights to socioeconomic and political inclusion. These are all rights that cannot be suspended – even in this time of a global health pandemic. DM

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https://www.dailymaverick.co.za/article/2020-07-05-the-strandfontein-relocation-camp-highlights-how-the-rights-of-the-homeless-are-being-violated/

The social work sector speaks out: A radical response is urgently needed

The idea of a Social Work Action Network (SWAN) evolved recently when some in social work questioned the sector's silence in the face of the Covid-19 crisis in South Africa. It was felt that there was a need for leadership and for a voice, both of which have largely been absent.

Aware of the critical and radical social work movement, SWAN-International, three practitioners and academics initiated a SWAN-SA WhatsApp group on 8 May, inviting people from the social work sector to join. Within a few hours, about 120 social work practitioners, students, and academics had joined.

On 18 May, we held a live webinar with about 80 participants, where the consensus was that there is a need for a radical/critical movement in the social work sector. We do not accept the status quo, we challenge structural causes of social problems and, being committed to social justice, we need to speak out against ongoing oppression, racism, exploitation, and dehumanisation of South Africans. Instead of pathologising victims of these problems, we blame the system that creates these conditions. We therefore recognise the need to collaborate and campaign with other social movements such as the C19 People's Coalition, the Food Sovereignty Campaign and Cry of the Xcluded, whose demands speak directly to social work.

SWAN-SA takes the position that Covid-19 has further exposed the forces driving structural inequalities in South African society, determining people's life and death struggles for survival. Inequality, poverty and unemployment, driven by racial capitalism, continue to shape the historic and ongoing schisms in South Africa between the mainly white elite, the black working class and precariat. These socioeconomic realities during Covid-19, together with inequalities associated with the climate emergency, pose a triple burden on our society.

Despite the government's efforts to respond to Covid-19, the vast majority of our people continue to suffer and bear immense hardships. The lack of income security, hunger and poor nutrition, and untenable housing conditions where the majority of poor and low-income households live in informal housing and overcrowded spaces, has increased the vulnerability of poor and working-class communities, where high unemployment puts pressure on households with no access to social security. These living conditions make them more susceptible to poverty, violence, and additional insecurities.

Women specifically also find themselves exploited in an inequitable distribution of care and unpaid care work, further perpetuating their vulnerability. Here we note with alarm the broad and general increase in gender-based violence. The escalation of physical, sexual, emotional, and psychological abuse leaves women and children with no escape from their abusers.

The Covid-19 crisis further exacerbates the desperate and dire living conditions of the majority of South Africans – rural and urban. It is essential that this crisis becomes an opportunity for structural change to the current neoliberal economic system driving these inequalities. Relying on dollar-based loans from the IMF and World Bank will lock South Africa into a debt spiral and austerity measures, which we can ill afford. The conditionality of such loans must be transparent and made public.

Social security in South Africa remains an issue. Of course, people would rather work than queue for meagre grants if employment were available, where the expanded unemployment figure is at 38%. The social work sector has argued for a Basic Income Grant as universal income for all those between 18 and 60. During this crisis, the government has introduced a similar COVID Social Relief of Distress grant as a time-bound intervention. This is an inadequate and unacceptable intervention because in most cases, it may be the only form of income for a household. Recent studies by the Food Sovereignty Campaign reveal that an essential basket of goods (38 food items) has increased from R3,221 to R3,470. Further, the online application system is oppressive, as being destitute does not allow the prioritisation of smartphones, email addresses and banking accounts. This further dehumanises poor people.

Similarly, the minimal increase by R300 per child of the child support grant for only May, and thereafter an amount of R500 per caregiver, is unjustifiable. To our knowledge, the child and family sector was not consulted. During lockdown, all children stayed at home, increasing financial pressure on the household through children going without school and/or the soup kitchen meals, plus an increase in consumption of utilities. The government cannot justifiably revert to R440 per child from June. There has to be immediate and urgent consultations with the child and family sector to determine a suitable child support amount. It is also concerning that no strategies have been put in place to protect vulnerable persons with disabilities during the pandemic.

The social service sector, which includes social work and social services practitioners, students, and educators, are best placed to provide meaningful crisis intervention for vulnerable people. However, we have not been included as primary attenders and responders to the Covid-19 crisis. Mental health, trauma, domestic violence, child abuse, bereavement, grief support, therapy, and other psychosocial interventions, were not considered to be essential services. Rather, social workers were mainly designated as distributors of food parcels and assessors of Covid-19 social security eligibility.

Food insecurity is a grave challenge in our country with an estimated 30 million people experiencing food stress and hunger. Government's food aid, humanitarian and other food security initiatives demonstrate the commitment to address hunger to a certain extent. Nonetheless, distribution mechanisms perpetuate gross indignity associated with poverty. Addressing chronic hunger during a crisis hardly begins to address the structural determinants of poverty. Therefore, small-scale farmers must be deemed as an essential service for food security. They should be assisted, supported, and prioritised to provide local markets with produce and to promote localised food supply.

All this points to a dire need for the Minister of Social Development, Lindiwe Zulu, to expand her consultation with the social service professions' sector to understand the extent and scope of social work services. Social service workers, specifically trained to render such services, must be deployed in strategic interventions to assist, for example, in formulating Covid-19 community spread prevention programmes, coping initiatives, mental health interventions, community education and awareness campaigns, bereavement counselling and psychosocial support to families. Post Covid-19, deepened inequality itself will need psychosocial intervention and structural reform.

During the lockdown, violent SANDF and SAPS actions have left people harassed, brutalised and even dead. Although the president has warned that those entities will be dealt with, to date no one has been held accountable for the blatant abuse of the most oppressed groups in society.

As usual, those living precariously, such as undocumented individuals from other African countries, migrant workers, and farm and domestic workers bear the brunt of further discrimination and exploitation. Although there may be provisions for these groups in terms of regulations, rights, and protections, many of them cannot access or realise these. The government should continue to find ways to extend support to such vulnerable groups.

The actions and agenda of the Minister of Higher Education and Training, Blade Nzimande, shocks us.

It is obvious that the higher education sector is in crisis, with inequities in online learning implementation among historically more privileged universities at the end of April, while disadvantaged universities have not been able to start due to resource deprivation and inaccessibility. The latest announcement of the allocation of data for NSFAS students for three months means nothing in contexts of deprivation, poor or no connectivity and lack of electricity. The minister must identify a strategy to address lack of access to digital resources, network coverage and other socioeconomic challenges such as lack of equipment, electricity and the living conditions that hamper learning. Failure to deal with such complex challenges will perpetuate the already existing educational inequities in the sector. A socially just decision would be that of allowing all online learning activities to happen in the context of all students having access to the same resources and learning conditions.

The department of basic education was set to reopen schools on 1 June. Together with organised teacher unions, we challenge this decision by Minister Angie Motshekga. We have no confidence in the department of basic education, as it appears that there is no adequate plan for the safety of children. Safe working conditions for school personnel, classroom overcrowding, scholar transportation (including for children of farmworkers), the repair of those schools that were vandalised, and assurance around the management of childrens' confidential medical information should be guaranteed before such reopening. The inappropriate decision-making and lack of communication lead to confusion and anxiety. It is evident that advantaged schools will open ahead of others, simply transposing inequalities also seen in the higher education sector.

Frontline health and care workers still plead for personal protective equipment (PPE) while facing the highest levels of risk. No worker should be required to work where they face personal health risks, without adequate provisions for safety and protection.

Finally, what is required is collective action and solidarity with efforts towards equity and redistribution. All social work and social service students, practitioners and educators are able to offer innovative ways to deal with the devastating effects of Covid-19 and its aftermath on communities. However, there is a need for systemic change.

This crisis has shown that it is possible for the government to make positive changes both in resource distribution and in the natural environment. Achieving these positive changes are political decisions. It is unconscionable that the majority of South Africans

should be living in conditions of socioeconomic and health precarity while there is enough wealth to achieve wellbeing for all.

Right now, there is a further risk of 'disaster capitalism', which deepens inequalities and enriches elites during large-scale crises. As the Social Work Action Network (South Africa), we do not see Covid-19 as separate from broader structural problems of race-based inequality, corporate greed, extractivism, and the climate emergency.

We call for a united front in working for social, economic, health and environmental justice for all South Africans.

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HTTPS://WWW.DAILYMAVERICK.CO.ZA/ARTICLE/2020-06-03-THE-SOCIAL-WORK-SECTOR-SPEAKS-OUT-A-RADICAL-RESPONSE-IS-URGENTLY-NEEDED/

MILITARY

In This Section

COVID-19: South Africa's neglected military faces 'mission impossible'

COVID-19: South Africa's neglected military faces 'mission impossible'

South Africa's military has been deployed in communities across the country to support efforts to contain the COVID-19 disease, and help save the lives of citizens.

In terms of the mission to combat COVID-19, the defence force will, among other duties, protect quarantine sites, deliver food and others essential supplies to mass storage facilities, help police restrict people's movements, conduct roadblocks and to curtail unrest.

But can it fulfil these duties? The South African National Defence Force has suffered from terrible neglect over the past 25 years of democracy. The result is that in this time of crisis, it may not be able to muster enough troops to maintain the lockdown.

Members of the South African Medical Health Services have also been deployed to provide health support services. But, only 2820 soldiers have been deployed, according to official reports.

The army only has 14 infantry battalions, consisting of about 810 men and women each - including 34 officers. And many soldiers are simply not deployable, due to poor health and other manpower constraints, or other commitments like border control.

In its current condition, the defence force cannot meet the demands placed on it to fight the coronavirus, in addition to serving on peacekeeping missions, and an array of other tasks, from disaster relief, to bolstering internal safety and security and safeguarding the borders.

Another big concern is that soldiers are not trained in riot control, nor do they have the appropriate equipment for this. This could result in them using excessive force against civilians in line with their training, in response to violence.

Why the army is in a parlous state

The South African National Defence Force's poor capacity to deliver on its mandate of safeguarding the republic against foreign aggression go beyond purely budgetary constraints. For the past 25 years' there has been little to no organisational transformation to reconfigure the force structure and design to meet current realities.

Force structure describes how military personnel, their weapons and equipment are organised for military operations, missions and tasks. Force design relates to the shape, structure and purpose to meet operational needs.

Instead, the military has been absorbed in the processes of political transformation, where the focus has been almost exclusively on ensuring that it is representative of broader society. The government has also been preoccupied with getting the military to be subservient to civil control.

I describe these processes, and the impact they are having in my new book, *South Africa's post-apartheid Military: Lost in Transition and Transformation*. Both processes are flawed, and have negatively affected the military's efficiency, effectiveness and professionalism.

Where military generals function out of misplaced political loyalty, this inevitably results in a breakdown in the chain of command.

Secondly, in terms of civil oversight, where non-military people lack knowledge of military matters, this affects the quality of debates on defence matters. It also imperils policy formulation and advice in terms of the military's strategic direction.

Another problem has been the effect of cultural and human resource transformation. This focuses on addressing historical inequality, such as racial and gender discrimination, and labour practices. Here there have been numerous challenges, such as dealing with the impact of HIV and Aids and military unions.

There are large numbers of military personnel who are not health compliant. This affects all generic personnel processes, including training, deployment, and maintenance and support functions.

The military has been facing numerous other human resource challenges. It has major skills shortages, imbalances in terms of personnel structures, and is unable to rejuvenate its forces. This has led to an aging force and rank stagnation, which means that people cannot be promoted. The reserves, which are being called up under the National Disaster Management Act, are in a similar state. With a strength of 20 000 and an average age of 43yrs, this back-up has limited capacity.

Risky choice

These political, cultural and human resource issues have distracted the military from focusing on the pressing issues of operational and organisational reform.

The 2015 Defence Review, maps out the future security landscape and priority tasks of the military. Priority tasks include to defend and safeguard South Africa, promote peace and security, and perform developmental tasks. But these ideals are unrealistic in light of current budgetary constraints.

It will take great ingenuity to restructure the country's armed forces to meet even the most key obligations, including countering external security threats against the country and peacekeeping in Africa.

External threats are both traditional and non-traditional, including regional and local conflicts; violent political, religious extremism as well as terrorism, and high levels of international crime.

Internally, threats include illegal immigration, crime syndicates, gansterism, and having to deal with medical crises such as Covid-19.

What's needed

The first thing that's needed to transform the military is decisive, strong leadership from politicians and military leaders. There needs to be a clear articulation of what capabilities they want going forward.

Priority tasks will increasingly be those affecting the citizens of South Africa directly, in cooperation with the police. These include deterring and preventing conflict, safeguarding borders, protecting critical infrastructure, and promoting safety and security. It'd be impossible for the defence force to perform these tasks effectively, and still contribute to peace and stability on the continent, within current budgetary and organisational constraints.

The reality is that South African citizens and politicians become interested in the affairs of the military only when there's a crisis. This leaves it to function in a vacuum.

The COVID-19 pandemic might just show how weak the country's military is. It remains to be seen if it will be up to the task if the frustrations caused by the lockdown were to erupt into violent conflict. How well it helps the police contain and suppress this violence will be a telling sign of the country's state of defence.

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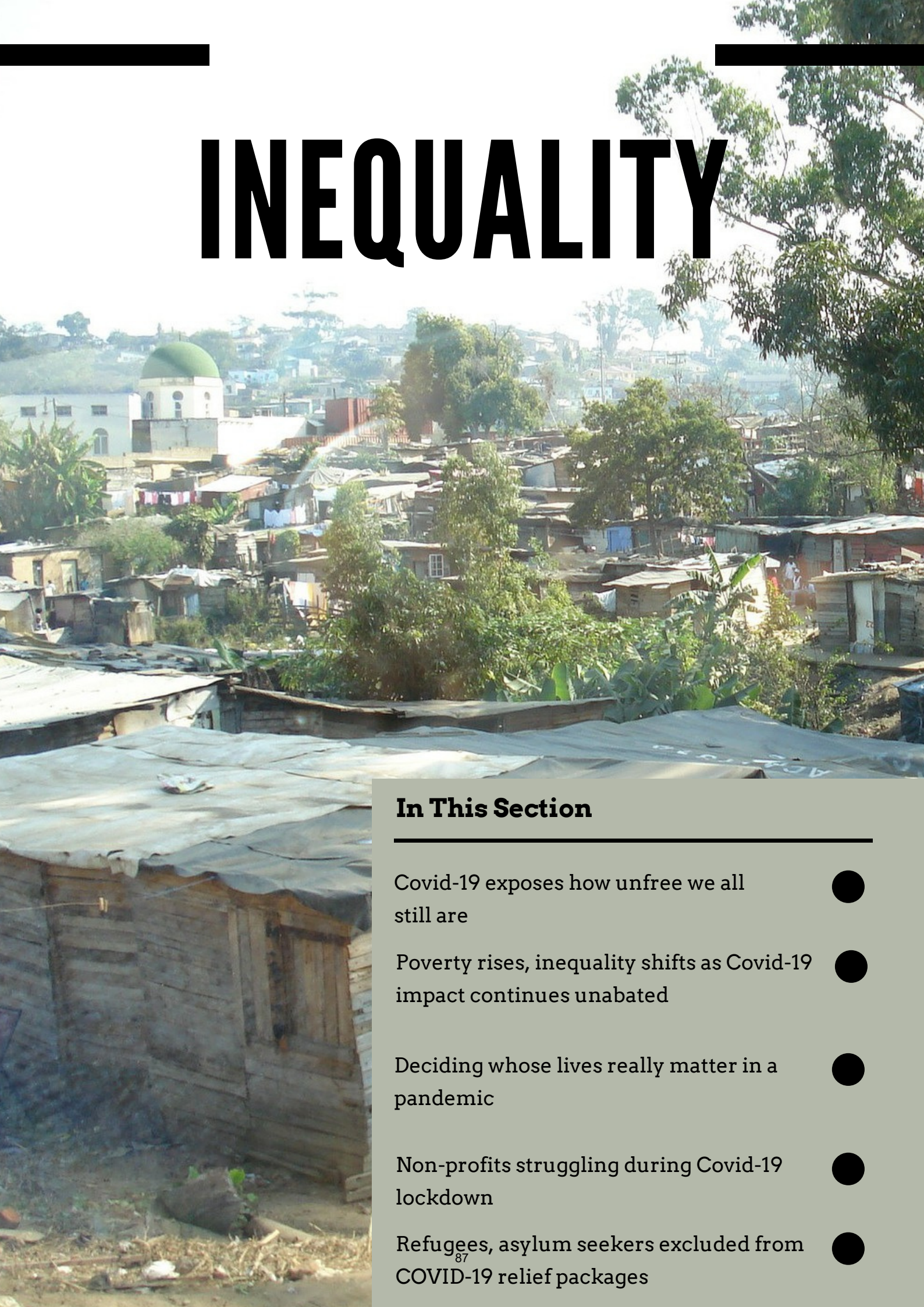
HTTPS://WWW.SUN.AC.ZA/ENGLISH/LISTS/NEWS/DISPFORM.ASPX?ID=7260

INEQUALITY



In This Section

Covid-19 exposes how unfree we all still are

The coronavirus pandemic is an acid test that has revealed how unfree we still are, despite recognisable progress. Freedom can be defined in a threefold manner. Freedom is always freedom from, freedom for, and freedom amid.

Millions of South Africans are still trapped in poverty. In his book Poverty in South Africa: Past and Present, historian Colin Bundy draws on the Copenhagen Statement and describes poverty as having "various manifestations, including lack of income and productive resources to ensure sustainable livelihoods; hunger and malnutrition; ill-health; limited or lack of access to education and other basic services; increased morbidity and mortality from illness; homelessness and inadequate housing; unsafe environments and social discrimination and exclusion".

About 29% of South Africans are still trapped in unemployment. This number is growing because of Covid-19. Unemployment causes problems on various levels. Although work does not determine our worth, being without work, income, and the ability to care for myself, my dear ones and broader society, does affect people's sense of dignity and value. Unemployment intensifies poverty.

All of us are still trapped in inequality. South Africa remains a country with the biggest gap between rich and poor. It is interesting and encouraging to note how many privileged South Africans are highly disturbed and moved by the suffering of fellow citizens who are homeless and hungry during this crisis, and who cannot practise social distancing because they are cramped into overcrowded houses and physical surroundings. The pain that these privileged South Africans feel amid the immense pain of fellow South Africans gives hope in these desperate days. Poverty is intensified if it exists in proximity to abundance.

It is clear that, although there is progress that we can tabulate, there are still too many people trapped and enslaved in poverty, unemployment and inequality for us to give ourselves a pass grade.

The second dimension of freedom deals with the responsibility associated with it. Freedom is both freedom from enslavement and freedom to eradicate enslavement. True freedom implies that we take up the responsibility to overcome poverty, unemployment, and inequality. We are free so that poverty, unemployment, and inequality will be no more.

The South African agricultural economist and theologian, Klaus Nürnberger, decades ago identified three sets of practices we need to follow to overcome poverty, unemployment, and inequality. These are practices of compassion, justice, and sacrifice.

To be free and to advance freedom for all is to live with a heart of compassion, mercy, and care. Compassion is to develop stomach nerves, to feel for my brothers and sisters who are homeless, hungry, without health care, helpless, threatened. Compassion is to be moved and mobilised to become my brother's keeper and my sister's shepherd. How fresh does former president Thabo Mbeki's call to all South Africans many years ago sound, to be each other's shepherds; to experience restlessness because of so many who are still trapped in destitution, desperation and despair? Freedom takes shapes through hearts of compassion.

Responsible freedom also entails that we develop practices of justice. Freedom and responsibility entails that we work for the fulfilment of so-called second-generation or second-dimension socioeconomic rights as well as third-dimension developmental and ecological rights. Various interdisciplinary and intersectoral think-tanks at universities and in other spheres of society seek theories, policies and practices that advance the implementation of these second- and third-dimension rights. At Stellenbosch University colleagues such as professor of social justice Thuli Madonsela and professor of public law Sandy Liebenberg, as well as other cherished colleagues and students, lead this crucial work. For freedom to reign supreme, we need heads that think justice.

A third practice that we need to overcome poverty, unemployment and inequality is the practice of sacrifice. Sacrifice has become a contaminated and unpopular word in many circles. Some womanist and feminist thinkers warn that this notion can be misused to perpetuate the oppression of women. Other warnings entail that this notion can become pathological and that it can lead to the blind romanticising, irrational idealisation and even threatening idolisation of giving up the self. Whereas some argue that sacrifice opposes the logic of economic growth and prosperity, others claim that this word cannot be used with reference to those who already have plenty. When such people share, they don't really make a sacrifice. To use the word sacrifice in this context is to make sacrifice cheap.
In his book Radical Sacrifice, English literary critic Terry Eagleton refers to sacrifice as moral sacrifice that is accompanied by the pain of a birth, the transformative and revolutionary pain of new life. Especially in this time of Covid-19 we need to feel and share this pain that harbours birth, transformed lives and radically new societies. Sharing, giving up, living with less, cherishing the small, treasuring simple living might be pathways to new societies, to a new normal. True freedom asks for hands of sacrifice that build the new amid the old; hands of sacrifice that start to build a new normal amid the crisis.

To advance freedom is to live with a sense of freedom amid so many signs of enslavement and captivity. Freedom amid implies that we celebrate and anticipate the freedom yet to come. With resilient and responsive hope, we work for freedom from all captivities and for freedom for a life of dignity for all. Hearts of

compassion, heads of justice and hands of sacrifice take us forward toward freedom for all.

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HTTPS://MG.CO.ZA/ARTICLE/2020-04-26-COVID-19-EXPOSES-HOW-UNFREE-WE-ALL-STILL-ARE/

Poverty rises, inequality shifts as Covid-19 impact continues unabated

Many have to fall back on that familiar South African last resort, the extended family. It will take some time before the full effect of Covid-19, the lockdown and recession will be clear, writes Servaas van der Berg.

The tentacles of Covid-19 are everywhere. From an economic perspective, it has a direct effect on the need to strengthen and expand the health system. But its indirect economic effects are much larger, through the lockdown with all its attendant effects, and the global recession which will continue even after the lockdown is over.

Already, some economists are forecasting a contraction of 10% in economic activity this year, and even this might be optimistic.

Thank heavens for the grant system!

Economic contractions do not affect everyone equally. Those most affected are tenuously linked to the modern economy. Workers in public employment and in most large firms are relatively protected. The jobs least affected by the lockdown are those that can be done from home using computers and internet connections which favour professionals and skilled workers.

The least protected are those who cannot work from home who have been in low-wage employment, in small firms or engaged in informal activities.

Before the crisis, South African income inequality was already extremely high, higher than has been observed anywhere else in the world. If those losing their income sources were already earning low incomes, this would worsen inequality, but may not increase measured income inequality all that much.

The already massive gap between high income earners and low-income ones will not grow much further when people who had little income to lose become poorer. Thus, measured income inequality may increase moderately from its already exceptionally high level.

What about poverty?

An opinion piece by Ihsaan Bassier, Joshua Budlender, Murray Leibbrandt, Rocco Zizzamia and Vimal Ranchhod in The Conversation showed a reduction of three-quarters of all informal income due to the lockdown would, on its own, increase extreme poverty, defined as an income of less than about R7 000 per person per year, from around 14% of the population to around 21%.

But these authors also showed that many informal sector workers were in households where there were also recipients of the child support grant (CSG).

The CSG, the star social policy reform of the post-transition period in South Africa, has been shown to have many benefits, inter alia for child nutrition, stimulating job search and labour force participation of women, and ameliorating rural poverty.

Now it offers a vehicle for reaching the poor and enhancing their income at a time when such vehicles are in short supply.

Bassier and co-authors demonstrated that increasing the value of the CSG would counter the impoverishing effect of the lockdown on informal income. If such an increase in the value of the CSG is large enough, it may even reduce poverty, all other things being equal.

The government too saw the value of using this grant and used it as a major social relief measure, although not quite to the degree these authors had advocated.

But the CSG cannot reach all who need social relief. Households fully dependent on informal sector income would not gain from an increase in the CSG and many would sink into extreme poverty, while some who were mainly dependent on the CSG may be lifted above the poverty line.

Other grants have also been increased.

The increase in the social old age pension is particularly welcome news for many rural households. Households in rural areas in particular, tend to form around income so the raised old age pension has wide benefits.

The demise of small entrepreneurs

The drying up of both informal and much formal sources of income during the current lockdown period changed economic prospects for many South Africans, not only poor ones.

In an economy desperate for sustained long-run growth to lift more people out of poverty, the lockdown and recession will have a devastating effect on small entrepreneurs who must serve as a major engine for growth in any long-run growth process.

Many, who had gambled by embarking on an entrepreneurial career and started new firms or businesses - even very successful ones - may not survive the lockdown or recession.

The tools at the disposal of the government to assist are limited and difficult to use: the scope for mismanagement and even corruption is large, the bureaucratic process complex, and the criteria for support difficult to apply.

Nor is there much fiscal space for even well-targeted and administered government support.

The way in which much of the funding voted for small businesses by the US Congress ended up in the coffers of big business is an example of how difficult it is to target such instruments well. Many small businesses, formal or informal, will thus probably not survive.

Some may rise from the ashes, perhaps even reposition their business to be better attuned to the new landscape; others may give up and join the job queue.

Those with specific skills and knowledge of the working of business may even jump to the front of that job queue. Some may once the economy again returns to growth - currently a dim prospect - return to informal or other entrepreneurial activities.

But all would bear the scars of the virus and its terrible twins, the lockdown and recession.

Rural-urban migration, households, and education

I mentioned earlier that South African households often form around sources of income. In rural areas, old age pensions act as a magnet, drawing in the unemployed, the non-economically active and children to what often become granny-headed households, while many other household members are in the cities working or searching for jobs.

So, children may remain while parents move to urban areas. The children may later join a parent or parents in the cities, often when entering primary or high school.

While part of the household remains in a rural area, rural pension incomes may be supplemented by child grants and remittances from urban household members. As urban roots grow stronger over time, fewer household members may remain in rural areas.

What will happen now that many urban individuals have lost their jobs or sources of income? We know that, during the Level 5 lockdown, many such people moved back to their rural homes.

If the jobs or informal business opportunities that attracted them to urban areas are gone, how many would give up and rather remain in the relative familiarity of their rural homes rather than starting the search for an urban income afresh?

Perhaps this may be true, especially for those who are only a few years below the age of pension-eligibility. On the other hand, remittances may also dry up.

And what about the children who have been brought back to the rural areas? It is not clear if all will return to their schools in urban areas.

Perhaps we could see some shifts in the school-going population when schools resume, with some rural schools expanding at the expense of urban ones. That may not last once economic growth resumes but in the meantime, it may not make education planning any easier.

Deeper inequalities remain

So, the lockdown has affected different people differently. Some have been plunged into poverty, while others have been rescued by relief measures such as the grant supplementation. Some have seen their dreams of successful businesses shattered. Many have to fall back on that familiar South African last resort, the extended family.

It will take some time before the full effect of Covid-19, the lockdown and recession will be clear. Income inequality may rise moderately, and poverty much more.

But Covid-19, the lockdown and recession again put the spotlight on deeper inequalities in our society, such as inequality of opportunity, of support structures, of safety nets, and of health services, to name a few.

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HTTPS://RESEP.SUN.AC.ZA/POVERTY-RISES-INEQUALITY-SHIFTS-AS-COVID-19-IMPACT-CONTINUES-UNABATED/

Deciding whose lives really matter in a pandemic

South Africans with disabilities should also have equal access to life-sustaining healthcare during the COVID-19 pandemic. This is the plea of Prof Leslie Swartz (Department of Psychology) and Drs Vic McKinney (University of Cape Town) and Emma McKinney (University of the Western Cape) in a recent article for Mail & Guardian.

In a recent article for The Conversation, Prof Keymanthri Moodley from the Centre for Medical Ethics & Law at Stellenbosch University notes that healthcare workers will have an unenviable responsibility to make difficult and "soul-wrenching decisions" regarding prioritising who will have access to ventilators as the COVID-19 pandemic takes hold. It is important in South Africa and elsewhere for there to be protocols to assist decision-makers with what will be burdensome decisions. In a context where need outstrips demand, there is really no single right way to decide on how to ration life-saving care.

We are positioned in a very particular way regarding this issue, and we believe that putting a personal face to the debate may be helpful. A fundamental question that is addressed implicitly in many ethical codes is one that is close to us: whose lives really matter? We ask what will happen to the 15% of South Africans with disabilities who may be deemed as less eligible than others to access healthcare. Will they receive equal consideration for life-sustaining healthcare in the context of the pandemic?

We have, as the phrase goes, skin in the game. Vic is a father of two young energetic boys, a part-time lecturer and researcher, and a holder of a PhD. He is also a motorised wheelchair user, a C4 quadriplegic paralysed from the shoulders down. He is privileged, living in his own home, with electricity, running water and access to full-time care assistants who assist him with basic daily functions. His wife, Emma, also holds a PhD and is a lecturer and researcher. She too has a disability – she has a hearing impairment. Leslie is a friend, and a disability scholar and activist.

Here is some of the story of Vic and Emma over the past few weeks. Before lockdown, we spoke about our fears regarding COVID-19. What would happen if we caught it? Would we be given treatment? Would Vic be ventilated? Vic is unable to cough properly because his chest muscles are paralysed, and contracting COVID-19 would most likely be devastating. We discussed how we would tell our two young sons, aged eight and five. Vic has started writing letters to them for when they are older, and he is no longer with them. Vic is our boys' rock, a very 'hands-on' dad. How would Emma explain that their father's life was seen as being worth less than others deemed 'more healthy' and more able to contribute to society?

Vic was kept alive by a life support-breathing machine for five weeks after becoming paralysed in a road accident 32 years ago and has led a fulfilling healthy life as a quadriplegic since then. It would be a sad irony if his death was a result of the same apparatus not being available.

Emma worries about getting ill and not being able to lip-read the masked healthcare workers. There are lovely images of plastic fronted masks circulating on social media platforms, but realistically this is unlikely to be a reality.

American philosopher and disability scholar Eva Kittay recently noted the lack of attention given by the media to those who are classified as being 'vulnerable.' She shares her personal experiences relating to her daughter who has a rare genetic condition and who has severe limited cognitive and motor abilities. Kittay compares COVID-19 and people with disabilities to "sitting on that sand beach watching and waiting for a tsunami."

Similarly, journalist Emily Beater argues that political and cultural attitudes in talking about coronavirus excludes disabled people. Our personal experiences of peoples' insensitivity towards those living with a disability are echoed in Beater's article. We put these down to a lack of education and ignorance and have received many awkward comments and questions over the years.

When it comes to COVID-19, as people who may be particularly vulnerable, we feel angry when people we know ignore the lockdown rules and use the "We will be fine and it just others that need to worry." We are worried. We are so fearful that we have decided to lockdown with only one care assistant. In order to live, since his accident Vic has need 24 hour care, and we have traditionally employed two care workers on a shift basis. Now, because of the pandemic, we have the same person in our home 24/7 for weeks. For all this time he is unable to be with his family. This is because our alternative care assistant cannot guarantee that he is able to self-isolate for 2-weeks due to where he lives. The risk is just too high.

Our story is one of privilege, but many of the issues are not unique. How will people who are Deaf, whose primary means of communication is sign language, understand what doctors are saying? How will people with visual disabilities and children with autism, for example, cope with not being permitted to be accompanied by family members or friend? Will people such as those with quadriplegia receive assistance to change their position regularly to reduce health threatening pressure sores, a wholly preventable cause of death but easily fatal without care?

As a family, we try to maintain a positive outlook on life. However. COVID-19 has forced us and many others, to consider our quality-of-life, future, and mortality as never before. On the afternoon before the lockdown, we paid a photographer to take family photographs in a local park. We smiled a lot and had a relatively good time. However, we experienced an underlying anxiety of what was to come Potentially, these could be our last photographs together.

Moodley's article referred to above concludes with the need to have a standardised national prioritisation plan in place in order to effectively respond to the pandemic. We agree fully. At a time of crisis, we need to do the best we can to use resources in as fair a way as possible. As most South Africans are aware, health resources in our country have historically been withheld from people on the basis of race gender, and age. Members of the LGBTQ+ community continue to face difficulties accessing appropriate healthcare.

It is hard to know, especially in times of crisis, how rationing decisions are made, with many of necessity being made on the spur of the moment and drawing on unstated assumptions. This is inevitable, and not a judgement on those forced to make such decisions in a time of crisis. At the heart of rationing decisions is an implicit question about who counts fully as a person, whose life has value and meaning, whose life means something to the lives of others.

We do not have the answer to all the difficult questions, but our appeal is simple. Don't assume that a life lived with a disability, however difficult that life may appear from the outside, is without meaning, worth and value. We ask everyone take our words seriously for our own sakes, but also for the sakes of millions of other disabled people with disabilities in South Africa. Please don't count us out yet.

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HTTPS://MG.CO.ZA/CORONAVIRUS-ESSENTIALS/2020-05-14-DECIDING-WHOSE-LIVES-REALLY-MATTER-IN-A-PANDEMIC/

Non-profits struggling during Covid-19 lockdown

Non-profit organisations play a vital role in many different industries and communities, but some are struggling to stay afloat during the Covid-19 lockdown due to dwindling resources, writes Anika Berning from the Department of Business Management in an article for *Fin24* (3 June).

The move to Level three of the nation-wide lockdown is an immense step forward for our economy as approximately 15 million people returned to work. While many businesses are happy to open their doors, others will unfortunately remain closed.

Consequently, the economy, already in recession, will keep plummeting. Before the Covid-19 pandemic, South Africa had an unemployment rate of 29,1% and the Chamber of Commerce predicts it could rise to 50%. As the lockdown continued over the last 60-plus days, there were growing signs of discontent and calls to end the lockdown as it is causing economic and social issues. It is suggested that 34% of South Africans have gone hungry during the lockdown. As a result, we have recently seen a spike in protests and people are asking for action.

Fortunately, several food banks have been established in poor communities and funds have been made available to expand these services. Non-profit organisations (NPOs), in particular, have played their part in alleviating the plight of millions of South Africans. Even though their efforts sometimes go unnoticed, the over 220 000 NPOs registered with the Department of Social Development play a vital role in many different industries and communities.

The crucial contribution of NPOs is underscored by Dr Armand Bam, Head of Social Impact at the University of Stellenbosch Business School (USB), who stated recently in a **blog post** that "What is worth considering is that NPOs act in communities where government and businesses are not able to reach. They are accessible and agile to attend to the current crises and need our support."

Highlighting their precarious situation, Bam said that "while government can rely on our taxes to stay operational and well-resourced businesses tap into financial reserves, NPOs primarily rely on donations and personal fundraising to ensure service delivery. Many of these organisations are now facing the threat of downsizing and retrenching staff while the need for their services increases."

The last 60-plus days have proved how important these organisations are in our society as they continue helping those in need while their own resources dwindle. Due to a lack of support, many NPOs are now facing closure which will result in more job losses. While the government has put in place a R500 billion bailout plan, no financial support has been set aside specifically for NPOs. Having some of these organisations close their doors would be terrible for the communities they serve. The support they get from various donors is often not enough. Just when they're needed most during the Covid-19 pandemic some NPOs have lost their donor support.

In an interview I had with people at an NPO, one person said "it is a frustrating time for NPOs, because in all their efforts they [NPOs] are still not a recognized sector unless connected. We still continue to persevere to ensure our beneficiaries get help during these stressful times because we made an oath, and we take it seriously". Another indicated that donors are reluctant to donate to NPOs during the Covid-19 lockdown and they rather donate to the Solidarity Fund. The efforts of the Solidarity Fund are not dismissed, but smaller NPOs do not have the time to apply for funds.

For them it is merely about survival, and they operate from day to day to deliver much needed services to their beneficiaries. It is here where society's comprehension of the social economy breaks down. This is a much-needed sector that provides services to a large part to our society; however, they lack the proper support from both the public and private sector. This leads to a vicious circle: with the lack of proper resources and funds, an NPO cannot grow and become

more professionalised, and without becoming more professionalised, they rarely receive more donations.

It is, however, not all doom and gloom when it comes to funding in these trying times. There are resources that NPOs can access that could help them to continue providing vital services to suffering communities. Some of these resources include the **Gap Fund** established by the Investment Group Mergon, the **Charities Aid Foundation Southern Africa** and the **Forgood Blog**.

The social economy is a very complex phenomenon in South Africa as it is extremely vital for delivering crucial services to a vast majority of our country.

Unfortunately, it is overlooked by government and not always taken seriously by donors. This leaves NPOs to fend for themselves. However, these organisations thrive on their mission, commitment and compassion which make them highly efficient and resilient amidst the Covid-19 pandemic. Our situation would be much more precarious without them.

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HTTP://WWW.SUN.AC.ZA/ENGLISH/LISTS/NEWS/DISPFORM.ASPX?ID=7409

Refugees, asylum seekers excluded from COVID-19 relief packages

Despite being protected in South Africa by law, refugees and asylum seekers have been swept aside when it comes to COVID-19 relief packages, writes Dr Callixte Kavuro from the Department of Public Law in an article for Mail & Guardian (29 May).

The rapid spread of Covid-19 has had a severe effect on the socioeconomic life of all of South Africa's inhabitants. It is, therefore, vital that they all receive protection in the form of access to healthcare, humanitarian aid and social welfare.

Refugees and asylum seekers, too, look up to the government for their protection because they cannot be protected by the home governments from which they fled.

These individuals are protected in South Africa by the Refugees Act of 1998.

Unlike other foreign nationals, refugees and asylum seekers are, by virtue of the Act, entitled to the right to work in South Africa to sustain themselves and improve their quality of life during their stay. However, in the labour market, owing to their desperation, they are usually exploited because many of them do not know where to seek justice.

Of main concern is that they have further been excluded from a number of Covid-19 aid packages for various reasons.

Before President Cyril Ramaphosa announced that South Africa would be moving to level 3 of the lockdown, all inhabitants had to close down their non-essential businesses and stay home. Medical services were offered to all people without discrimination based on nationality. The equal treatment was inevitable because Covid-19 does not differentiate between nations, nationalities, or classes. The government's health responses had to include migrants to prevent a nationwide calamity.

The government recognised that many people who could not generate an income because of the lockdown regulations would not be able to feed themselves and their families. Consequently, food parcels were distributed as a form of humanitarian relief. There were reports, however, that these parcels were distributed based on nationality and political affiliation. Since politics played an important role in the provision of humanitarian relief, vulnerable migrants fell through the cracks. This had an even greater effect on the lives of refugees and asylum seekers, as they could not access food security.

The most vulnerable, however, are asylum seekers who are excluded from access to the social grant scheme and social relief of distress grants (i.e. unemployment grants). These schemes are designed to assist the vulnerable and unemployed to feed themselves. The exclusion of asylum seekers from these Covid-19 humanitarian relief schemes is a concern, as their humanitarian needs must be protected in line with the twin rights to life and human dignity as envisaged by the Refugees Act.

In this regard, economic relief measures designed to pay salaries for employees, to save jobs or to insulate

businesses should have considered the plight of asylum seekers and refugees.

They should benefit from the temporary employer-employee relief scheme (TERS), administered by the department of employment and labour (DEL) through the Unemployment Insurance Fund (UIF). Refugees and asylum seekers, however, have struggled to receive their salaries through TERS during the lockdown as their employers told them that the no-work-no-pay principle applied.

Difficulties further arose in situations where companies have used the lockdown period to retrench their employees en masse. Like other retrenched employees, retrenched refugees and asylum seekers should benefit from the UIF because they have contributed to the fund. It is problematic, therefore, that their exclusion has been justified by the DEL which claims that its computer system is not designed to capture the numbers appearing on their status permits. This problem persists regardless of the fact that the Equality Court in the 2017 case of *Saddiq vs Department of Labour and Other* ordered the department to fix its computer system to capture the numbers appearing on these permits.

Refugees and asylum seekers in informal and formal sectors of the economy are more vulnerable, especially since relief schemes designed to respond to stressed small and medium-sized businesses were limited to citizens. As a result, they have no access to the debt relief finance scheme, the business growth/resilience facility, the tourism relief fund for small, medium and micro enterprises (SMMEs), the relief funding for distressed businesses, the employer relief fund or the national empowerment fund support, which could have helped their businesses survive this period of economic distress.

On top of this, there has been a political campaign to bar migrants from participating in small business sectors and from employment in certain sectors of the economy. It appears that the Minister of Small Business Development, Khumbudzo Ntshavheni, the Minister of Finance, Tito Mboweni, and the Director General of Employment and Labour, Thobile Lamati, are spearheading this campaign which could encroach on the rights and freedoms of refugees and asylum seekers to participate in economic activities in the future.

Although permitted to work, the right to work for refugees and asylum seekers is restricted by section 22 of the Constitution, which takes away the right to choose their trade, occupation, or profession freely. The right is further restricted in terms of the Employment Equity Act (EEA) of 1998 and the Immigration Act of 2002. Although the EEA requires employers to prioritise employment of designated groups (Africans, women, and people with disabilities) through the implementation of affirmative action, the immigration laws require employers to employ migrants on conditions that (i) he or she is highly skilled or possesses a critical skill and (ii) that there is no available suitable citizen to be employed in that position.

Refugees and asylum seekers do not fall within the designated groups because they were not affected by past practices. It is unfortunate that nothing in the Refugees Act exempts them from these restrictive employment measures. Alternatively, they have had to create their own small businesses in order to survive.

The state's attempt to bar refugees and asylum seekers from operating small businesses was successfully challenged in the 2015 case of *Somali Association of South Africa vs Limpopo, Department of Economic Development, Environment and Tourism* in which the Supreme Court of Appeal (SCA) interpreted the right to work to mean the undertaking of business or employment. Although asylum seekers' right to participate in economic activities is still debated rather controversially in the political arena, the SCA in the 2004 case of *Minister of Home Affairs vs Watchenuka* has affirmed that they should work to protect their dignity.

In this difficult time, the government should desist from viewing refugees and asylum seekers as "economic migrants" and show its commitment to protect them as it has promised to do in terms of the Refugees Act and align its Covid-19 responses accordingly.

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HTTP://WWW.SUN.AC.ZA/ENGLISH/LISTS/NEWS/DISPFORM.ASPX?ID=7404

COMMUNITY

In This Section

COVID-19: Without communities, actions are doomed to fail

With the Western Cape now being in the lead with confirmed positive COVID-19 cases, the peaking community transmissions are concentrated in the poor and overcrowded townships in the Cape Town metropole. Mrs Vuyiseka Dubula-Majola, Director of the Africa Centre for HIV/AIDS Management at Stellenbosch University, argues that the response to COVID-19 requires partnerships with communities as well as the co-creation of interventions with community-based organisations.

The number of confirmed cases in the metropole has risen to 5167, of which Khayelitsha accounts for 731, Klipfontein for 631, and Mitchell's Plain for 509 (on 11 May 2020 according to the Western Cape Department of Health).

As the number of cases grow exponentially and it becomes imminent that more people will be infected with Covid-19 over the next few weeks, a public health disaster – for both the public and the Western Cape government – is emerging.

Many of the poor already face enormous socio-economic crises with major job losses, food insecurity, and lack of masks as well as clean running water, which makes the possibility of 'staying at home' during lockdown hardly possible if not impossible.

In the early days of the AIDS movement, actions such as building on existing community-resilient structures and strengthening relationships between state health providers and communities were proven to be successful during an emergency.

Community-centred reaction is necessary to ensure access to public health information, understanding of isolation, health rights literacy, and the essential role of communities in monitoring and accountability. Our response to COVID-19 should therefore be more than a medical intervention and should be embedded in communities. As we learnt from the AIDS activists: "Whatever is done without communities, is doomed to fail."

Community-based organisations have joined forces to support public awareness creation, health literacy, and door-to-door health screening for more than one disease.

Communities' resistance to health interventions has been fuelled by fear and misinformation rather than information. As in the case of TB and HIV, the public is inundated with false information about COVID-19, hence community awareness is critical.

When knocking on doors, health activists have to be prepared to answer any number of health-related questions as many people still need information about a variety of health conditions. Each household presents an opportunity for not only COVID-19 screening, but to find people living with HIV or those who do not know their HIV status. While offering HIV tests to some, others have disengaged from HIV care and need to be connected to health care again. Although health needs may differ, messages regarding COVID-19 and HIV have to be crafted carefully to avoid confusion and mixed messages.

In addition, every open door offers an opportunity to screen for TB and diabetes, and make assessments regarding food security, gender-based violence and mental health.

The response to COVID-19 therefore requires mutual partnerships and co-creating interventions with community-based organisations is vital.

It is not unusual to see the same faces, mostly AIDS activists, during health and social justice crises. Some of the stalwart community-based organisations playing a vital role in the COVID-19 crisis are the following:

Movement for Change and Social Justice

The Movement for Change and Social Justice (MCSJ) is a not-for-profit, non-partisan, and non-religious alliance of organisations aimed at improving the health and lives of people in Gugulethu and surrounding areas. They work in Klipfontein, which includes Gugulethu, New Crossroads, Nyanga, Manenberg, KTC, Philippi and Heideveld.

Activist Education and Development Centre

Another not-for-profit organisation, the Activist Education and Development Centre (AEDC), aims to support community-based activists in the Western and Eastern Cape, Gauteng and KwaZulu-Natal. The organisation mainly supports women living with HIV and those affected by inequality in order to improve their economic and educational status. Most of the AEDC and MCSJ activists can trace their roots to the Treatment Action Campaign branches in the Western Cape.

Umoja for Africa

Umoja for Africa is also a not-for-profit organisation who focuses on skills development and sharing between disadvantaged refugee and migrant communities and South African citizens for social cohesion purposes. Umoja has trained AEDC and MCSJ women activists to

sew re-usable face masks. They are now sewing 15 000 of these face masks to donate to families in need.

The community outreach areas of AEDC and MCSJ include Khayelitsha (all areas), Klipfontein (Gugulethu and Nyanga) and Mitchell's Plain (Philippi, Samora Machel and Cross Roads). They work in partnership with the Africa Centre for HIV/AIDS Management at Stellenbosch University (who also supplies volunteers with easily identifiable bibs), Medicines Sans Frontières (MSF) in Khayelitsha, and Khethimpilo in Klipfontein and Mitchell's Plain.

The activities of these organisations are aimed at promoting community health by public awareness of and education on wearing and caring for face masks, social distancing, isolation, assessment of other health conditions and referral; awareness of antiretroviral therapy (ART) services available during lockdown such as accessing medicines closer to home; and assessment of food security, distribution of food vouchers and referral to food distribution points.

A multitude of approaches are used, including door-to-door health education about hygiene and the distribution of health pamphlets and condoms. Another is putting up COVID-19 posters at busy areas such as bus stops, spaza shops, shopping centres and taxi ranks.

The volunteers involved are trained by Medicines Sans Frontières (who provides them with hand sanitizers and masks) and Khethimpilo. All volunteers have to undergo a health assessment to ensure their health will not be compromised when partaking in the outreach. So far, only one volunteer had to be withdrawn from activities due to her age and existing health conditions that placed her at risk of COVID-19 infection.

Most volunteers are young activists, some of whom are living with HIV but whose condition is stable thanks to ART. All of them follow the guidelines regarding personal protective equipment when going into the field. They can easily be identified by their maroon reflector bibs with the words "*revolving door to health*" on the back.

VUYISEKA DUBULA-MAJOLA, DIRECTOR OF THE AFRICA CENTRE FOR HIV/AIDS MANAGEMENT, FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES

HTTPS://WWW.SUN.AC.ZA/ENGLISH/LISTS/NEWS/DISPFORM.ASPX?ID=7365

Africa united in battle against COVID-19

On Monday (25 May) we celebrate Africa Day. In an opinion piece for *News24*, Dr Nico Elema from the Centre for Collaboration in Africa writes about how Africans are united in the battle against COVID-19.

The year 2020 will probably be remembered for how the COVID-19 pandemic was able to bring the world to a stand-still. In recent history, other pandemics such as SARS (2002), H1N1 Swine flu (2009), and MERS (2012) did cause a global response and disruption, but it is probably fair to say that the COVID-19 pandemic has caused a global response like never seen before, with terms such as 'lockdown', 'social-distancing' and 'the new-normal' now part of our common vocabulary.

As we celebrate Africa Day on 25 May, we are still in the grips of the COVID-19 pandemic. To date, purely based on the number of cases, the epicenter has moved from China to Europe to North America, with many holding their breath contemplating the anticipated impact on Africa. According to the World Health Organisation, Africa has, to date, reported 1,33% of all cases. Dare I say 'only' 1,33%? Considering that the Americas recorded 44% of all cases, Europe 40%, the Eastern Mediterranean 7%, the Western Pacific 4%, and South East Asia 3%, Africa, with its 1,3 billion people or close to 17% of the world population. Regarding Africa's low infection rate, experts argue that there is inadequate testing with others asking why the hospitals are not overflowing with patients showing COVID-19 symptoms. Thus, the verdict could still be out, and will we probably only over time come to grips with the full extent of what we are now facing.

Indeed, many parts of Africa are scarcely populated, but according to the United Nations, around 40 to 45% of Africans live in urban areas, with many living in a number of mega-cities such as Lagos, Kinshasa, Addis Ababa, Cairo, and Johannesburg. To curb the spread of COVID-19 among these people and those living in peri-urban and rural areas, social distancing and the regular washing of hands have been recommended strongly. Here's the challenge though: UNICEF estimate that for 63 percent of people (or 258 million people) in Sub-Saharan African urban areas there's no access to handwashing at home. Given Africa's high urbanisation rate and low access to water, the question can be asked if we are sitting on the proverbial time bomb?

With no blueprint on how to respond to the COVID-19 pandemic, lockdown measures are the norm for many countries. Globally, inequalities are highlighted, with the haves being able to withstand the onslaught of the coronavirus pandemic and the have-nots struggling to find the next meal. With many African countries based on informal labour markets with high unemployment rates, lockdown measures will inevitably increase

unemployment rates. This will put pressure on the social welfare of countries, with the potential to wipe out any economic gains achieved over the past few years. For example, there have been no less than 20 African countries with an annual Gross Domestic growth rates above 5% in the last few years. These include countries such as Ethiopia, Rwanda, Ghana, Tanzania, Egypt, and Kenya to name a few. One could ask the question about how robust these economies are, and whether they will be able to withstand the impact of the COVID-19 pandemic.

Despite this rather gloomy picture, there are positives true to the reason why we celebrate Africa Day. There is a sense that Africa is united in its fight against the coronavirus pandemic. At a high-level, the African Union, through its African Union Development Agency NEPAD (AUDA-NEPAD), is coordinating various efforts in response to the pandemic. In early April, the AUDA-NEPAD Response Plan of Action to COVID-19 was launched, directing efforts around six focus areas, which include Health Systems, Food Systems, Skills Development & Employment, Education, National Planning & Data Systems and lastly Sustainable Tourism. Various responses emanate from these focus areas, such as the recently AUDA-NEPAD online Dashboard providing decision-makers with vital data on COVID-19 cases.

The sense of solidarity and unity is also visible in higher education in the continent. For example, the Institut Pasteur in Dakar, Senegal, with its wealth of knowledge in dealing with AIDS and Ebola, is producing rapid COVID-19 testing kits at 1$. At the University of Ghana, scientists have successfully sequenced the genome of the coronavirus in Ghana, and at Addis Ababa University in Ethiopia research is undertaken to determine the psycho-social and economic impacts of the current pandemic.

In Uganda, Makerere University has been a part of the development team of the Coronavirus Resource Centre, a website established to help advance the understanding of the virus, informing the public and brief policymakers in order to guide response, improve care, and save lives in Uganda. Since a major focus of the Makerere University team is doing research and outreach related to refugee health, much of their current focus is monitoring for COVID-19 among refugee communities and camps in the country. Also in the East-African Region, scientists at the University of Nairobi have found that 10% of bats carry the coronavirus.

At Bahir Dar University in Ethiopia, colleagues have been working closely with the federal government providing technical support and advice, contributing to community mobilization for COVID-19 prevention, treatment and recovery operations action plan, and regional Emergency Operation Centre. Similarly, colleagues at the University of Antananarivo, Madagascar, have been working closely with the Ministry of Disaster Risk Management and Ministry of Population, Social Protection and Women Promotion in the country to advise upon strategies and raising awareness about COVID-19 in Madagascar. At my own institution, Stellenbosch University, our Division for Research Development has recorded no less than 23 research initiatives specifically related to the COVID-19 pandemic – some completed, and others in-process and awaiting ethics approval.

These are just a few examples that show that African institutions of higher learning and many other organisations can play their part in collectively helping fellow Africans face the pandemic head-on and “rise like lions", to use the words of the renowned African poet, Ben Okri.

Even though we have been forced to re-set the compass and to celebrate Africa Day differently in 2020, I have a distinct feeling that we will get through this and find ourselves in a better place.

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HTTPS://WWW.NEWS24.COM/NEWS24/COLUMNISTS/GUESTCOLUMN/OPINION-AFRICA-DAY-A-CONTINENT-UNITED-IN-ITS-BATTLE-AGAINST-COVID-19-20200525

In This Section

How women in academia are feeling the brunt of COVID-19

How women in academia are feeling the brunt of COVID-19

The COVID-19 pandemic and the consequent public health response of lockdown has brought into sharp relief the constraints faced by women across the board.

We have been keeping a keen eye on the impact it's having on women in academia – our field of work and research. What we're observing, and what's being backed up by research, is that women are facing additional constraints as a result of COVID-19.

These range from the added burdens and responsibilities of working from home, through to the fact that fewer women scientists are being quoted as experts on COVID-19, all the way to far fewer women being part of the cohort producing new knowledge on the pandemic.

None of these constraints are new. Earlier research confirms that women academics carry large teaching burdens, with relatively little time for research and publication compared to their male colleagues, many of whom do not carry equivalent domestic responsibilities.

Increased pressure on women academics caused by the COVID-19 pandemic is magnifying this fractured landscape of gender parity in academia. The impact is being felt in terms of productivity. This is manifesting itself in terms of public exposure, knowledge generation and who is being called on to provide advice.

Academic output

An article in the World University Rankings points to the bias towards men experts in media coverage of COVID-19. Written by a group of women scientists, the article points out that women are advising policymakers on the outbreak, designing clinical trials, coordinating field studies and leading data collection and analysis. But, when it comes to media coverage, there is a bias towards men. While epidemiology and medicine are women dominated fields, men get quoted far more often than women about the pandemic.

A June 2020 article in the correspondence section of a leading medical journal, The Lancet, makes the same point. It points out that women have made up just 24% of COVID-19 experts quoted in the media and 24.3% of national task forces analysed.

Women's outputs are being affected in other ways too. A recent article in Science News shows that fewer women were first authors on articles related to COVID-19. This was especially so in the first months of the pandemic. They compared 1,893 articles published in March and April 2020 with those from 2019 in the same journals and found that first authorship for women declined by 23%.

This they attribute to the increased demands of family life during the pandemic.

The Guardian newspaper also reported a decrease in women's academic outputs, with the journal Comparative Politics reporting that submissions by men went up by 50% in April.

The Lancet article makes the same point.

Recent data from the US, the UK and Germany suggest women spend more time on pandemic-era childcare and home schooling than men do. This is particularly difficult for single-parent households, most of which are headed by women.

Domestic constraints

The article by women scientists in The Lancet makes it clear that none of the challenges are new.

Challenges women in academia face are well documented in non-pandemic times. These challenges include male dominated institutional cultures, lack of female mentors, competing family responsibilities due to gendered domestic labour, and implicit and subconscious biases in recruitment, research allocation, outcome of peer review, and number of citations.

But they write, COVID-19 has led to unprecedented day care, school and workplace closures exacerbating challenges.

For decades, women in academia and professional practice have striven to achieve work-life balance, juggling professional and domestic responsibilities.

Institutional support for women in terms of maternity leave, childcare facilities, lactation rooms, flexible working hours and protected research time varies across institutions in South Africa. It is lacking in many.

And now women are working from home, where they are also expected to take care of children and elderly parents, do home schooling, clean, cook and shop.

Addressing the problem

This disproportionate effect on productivity of women has the potential to bleed women from academia. This will have a negative impact on the diversity that is critical for excellence in academia and in civil society.

None of this is factored into promotion criteria or performance assessments, when women in academia compete directly with their male counterparts. Consequently, women are seriously underrepresented in academic leadership, perpetuating a patriarchal institutional culture in tertiary educational institutions.

Some global funding agencies, among them the European and Developing Country Clinical Trial Partnerships and

the National Institutes of Health, have recently started to consider constraints facing women scientists in grant applications. This effort needs to be seriously expanded.

This could be done via revisions to existing policies and proactive development of new policies to create optimal gender balance in research. Funders also have a responsibility to explore how institutions that financially benefit enormously from research funding via indirect costs support women scientists in academia.

Scientific journals are becoming sensitive to gender balance and diversity with respect to authorship. But the requirement for gender equity in terms of participants included in research studies and authorship must be tightened.

Similarly, conference panels and keynote speaker selection are in dire need of appropriate representation of women, especially those from the global South, whose voices are underrepresented in international academic meetings and scientific conferences. Anything less than these efforts will perpetuate pre-COVID-19 levels of gender inequity and lack of diversity. Sadly, academia will be the poorer for it.

KEYMANTHRI MOODLEY, DIRECTOR, THE CENTRE FOR MEDICAL ETHICS & LAW

PROF AMANDA GOUWS, POLLICAL SCIENCE

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https://theconversation.com/how-women-in-academia-are-feeling-the-brunt-of-covid-19-144087

NATURAL ENVIRONMENT

In This Section

Threads of life: We have an opportunity to restore vital ecosystems

Our survival depends on a healthy planet. One whose health is about being resilient; the ability to recover after a setback. In turn, the ability to bounce back means having rich and productive ecosystems with all the basic facilities to recover. These facilities are about allowing populations of organisms, from the smallest to the largest, to thrive.

The reality is that all populations have checks that stop them from spiralling out of control, or alternatively, they have needs that prevent them from going extinct. The checks come in the form of climate, disasters, disease and being eaten by something else. That is the nature of things. It is now upon us to ensure their needs are met.

There is no such thing as the balance of nature, but rather the dynamics of nature. Organisms ebb and flow across landscapes in search of the best conditions to feed, breed and rest. This includes plants and fungi, through their seeds and spores.

What we have been doing to all other organisms is either remove them, or put them into permanent lockdown by parcelling up landscapes with buildings and fields. This confinement has prevented them from finding optimal conditions where they are healthy enough to leave offspring with a bright future. Organisms have been removed by displacement and death through cutting down of habitat, application of poisonous chemicals, the building of roads and cars, and plain carelessness.

The loss imposed by biotic lockdown means that the full fabric of life across the globe is being unravelled. Because organisms can no longer find the best conditions for survival and breeding, they die out. The pulling out of one thread of life makes another one vulnerable, with the tapestry of life meanwhile losing its value. In short, we are increasing life's vulnerability, while reducing its resilience.

In this time of Covid-19, we have seen how quickly life can recover, given the chance. The skies and streets have clearer air, and we can hear birds singing that we had forgotten existed through the din of mechanisation on the ground and in the air. African penguins are walking the streets of Cape Town, and families of Cape foxes have been out and about during the day, even a Cape leopard has ventured within sight of housing.

During this Covid-19 pandemic, we have all had time to consider more deeply how we value life in its entirety. The value of food and kind and loving relationships have reached a new level of importance. The great value of the outdoors has also made us realise what freedom actually means. We have been able to appreciate nature in all its forms from clear skies and the formation of clouds to the joy of the very fabric of life.

These trying times have also enabled us to appreciate the invisible. Hidden beneath our feet and all around us are myriad little creatures whose contribution to our well-being we have ignored for far too long. Whole task forces of small creatures are making and turning the soil, keeping it alive, and enabling our world to remain flexible and resilient. All this depends on the sun's energy which is captured by plants and converted through their greenness into energy available to us and many other organisms.

It is time now to redirect this crisis and turn it into an opportunity. The care that we show to each other should also be extended to the world around us. As we celebrate the International Day for Biological Diversity on May 22, we should also keep in mind that caring about all life is crucial if we are to survive well into the future.

So, how do we start the process of reviving our ecosystems?

A good starting point would be to stop quick-fix solutions just because they are cheap now. The long-term price can be horrendous. We have seen how cheap air travel and leisure cruises led not only to massive air pollution but also provided contagion highways. Poor respect for the soil has meant its devastating loss and deterioration over time.

Plastics in the ocean are killing marine life. The chopping down of the rainforests and, with it, the wholescale massacre of life — best described as "lifecide" — is leading to nutrient cycle deterioration and climatic disasters across the world. Continued high-carbon emissions will lead to further aggravation, and not just loss of huge swathes of agricultural land, but also of many coastal cities.

The baseline for change desperately requires a move away from selfish, immediate economic gains towards a future that coming generations can enjoy. New and advanced technology alongside embracing good old-fashioned caring-for-nature will see us through. We need careful and strategic thinking and must dump our desires and cravings for quick fixes and more "things".

We should exchange immediate self-gains and self-enhancement for mutual caring and equitability globally, especially through overcoming our innate tribalism. It can be done. We have much of the basic science to do so, now is the time to act.

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https://mg.co.za/environment/2020-05-21-threads-of-life-we-have-an-opportunity-to-restore-vital-ecosystems/

Appreciate and conserve nature in lockdown

On Tuesday (28 July), we celebrate World Nature Conservation Day. In an opinion piece for *News24*, Drs Tony Rebelo (South African National Biodiversity Institute) and Alanna Rebelo (Department of Conservation Ecology & Entomology) write that we should continue to appreciate and conserve the plants and animals around us during the lockdown.

This year, the height of Covid-19 lockdown in April coincided with the fifth **iNaturalist City Nature Challenge**. In this annual global nature hunt, the public are encouraged, as citizen scientists, to go and explore their cities and report on the animals and plants that share our world.

With everyone confined to their homes in many major cities around the world, with only some fortunate enough to have gardens or balconies, this posed a major challenge for a nature hunt.

Although just a few months have passed, it is already hard to remember that in South Africa we were only allowed out for medical emergencies and food. Which meant that nature interaction was confined to one's home.

Lockdown was, however, no excuse for passivity in a megadiverse country like South Africa. Many Capetonians discovered the wonders of a nectar feeder, or the power of a half apple and a handful of seeds left outside. Many birds and critters could be enticed to visit when human visitors were forbidden.

Lockdown became a time for people to engage with the wildlife in their homes and gardens. You might ask how you can engage with nature? If you have gardens, you can, for example, look for and record the elusive Dwarf Chameleon, or have a garden party and record all the critters visiting the flowers, the plants, and your picnic.

If you are a night owl, why not hold a night expedition, and look for spiders and insects by their eyeshine, and the pale chameleons, and other denizens of the night, like praying mantises, crickets, and frogs?

No garden is no excuse not to interact with nature. You can do bird surveys from your windows or set up moth traps (sheets illuminated with a bright light at night) or insect hotels or nesting boxes. Inside our houses, the geckos, mosquitoes and other goggas can entertain and infuriate us.

If you are feeling lonely, isolated, and socially distanced, you need only to peek into the corners and under the beds to find ants, house flies, or perhaps even cockroaches and bed bugs. But besides these obvious pests, there are also a great diversity of amazing moths, fishmoths, spiders and beetles.

As we celebrate World Nature Conversation Day on 28 July, it helps to maintain a perspective of the value of all life when one considers that each is visiting our dwellings for a very good reason, and many of them are actually cleaning up after us, or helping keep down pest numbers.

City Nature Challenge: Lockdown edition

At the end of April 2020, **six cities in southern Africa** took part in the City Nature Challenge 2020 lockdown edition, of the 244 worldwide: Cape Town, the Garden Route, Durban, Nelson Mandela Bay, Tswane and Gaberone.

Cape Town again – for the second year running – scored top spot in the world for number of nature observations (34 254). Interestingly, almost a quarter of all Cape Town's observations were collected by the Scouts. Although the Garden Route only made position 10, it secured second spot for cities outside of the United States.

Expressing her amazement at the results, Dr Eleanor Yeld Hutchings from the **Biodiversity Management Branch of the City of Cape Town** said: "For a country [that was in] hard lockdown I think it's unbelievable how much we managed to do."

Cape Town's top observer was Grade 11 learner Jeremy Gilmore, who racked up 834 observations. Several hundred observations from a garden is no mean feat. He is one of Cape Town's youth, who has a passion for learning about indigenous flora, as well as protecting what we have left. In his spare time, he joins the **Friends of Tokai Park** in hacking alien trees in Tokai Park to protect the Fynbos.

Our City Nature Challenge success is perhaps not surprising in a country like South Africa, where we have an estimated 67 000 animal species, and over 20 400 plant species **described**. We have around 7% of the world's vascular plant species, 5% of mammal, 7% of bird, 4% of reptile, 2% of amphibian, 1% of freshwater fish and 16% of shark, skate, and ray species. And not only this, but around half to two-thirds of the species in each of these groups are found only in South Africa).

A tale of six cities in lockdown

And so, continues the **tale of the six cities**. The City Nature Challenge turned out not to be just a one-off event, but the beginning of nature exploration and appreciation in and around our homes during hard lockdown. Many residents joined one of the six city lockdown projects on iNaturalist and recorded the life around their homes.

We can learn a lot from what people found and shared. In the Fynbos, of course birds feature highly around people's homes, but Cape Town's top position goes to the Dwarf Chameleon, Marble Leaftoe Gecko, the Honeybee and Brown Garden Snail (an invasive alien: you know the one), with the Redeye Dove making position five.

In the **Garden Route**, where Fynbos meets the forests, birds take all the honours: Cape Weaver, Greater Double-Collared Sunbird, Redeye Dove, Fiscal Shrike (Jannie) and the Speckled Mousebird.

At the interface of the Fynbos and thicket biomes, **Nelson Mandela Bay** features the Common Dwarf Gecko, Tropical House Gecko, Honeybee, Citrus Swallowtail and Common Blue in its top five.

Would you have guessed that the four most recorded animals in **Durban** are butterflies? – with the Common Bush Brown, Natal Pansy, Dark Blue Pansy and Citrus Swallowtail leading the pack, and a dragonfly, the Julia Skimmer, in spot number five. Staying with the grassland biome, the city of Tswane recorded Honeybee, Spiny Sugar Ant, Laughing Dove, Hadeda and Common Dwarf Gecko as the species most commonly found in gardens.

And **Gaborone** is off the charts, literally. Of the top five animals, only one moth – the Vestal – has a common name: the other Antlions, moths, bugs, and beetles still need to become better known before they are baptized with vernaculars.

Who would have thought that the tale of six cities would be so different, so rich, and so exciting? We should take stock of the animals and plants that share our homes and gardens (for example using the free **iNaturalist** app). Conservation and environmental awareness are fun, joining a global community is free, and you can begin at home.

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https://www.sun.ac.za/english/Lists/news/DispForm.aspx?ID=7527

Covid-19: A terrifying glimpse of a future where overpopulation and climate crisis overwhelm Earth

A major consequence of overpopulation and the climate crisis is that wildlife has had to adapt to living in a new proximity to human beings. The increased contact between humans and wild animals has massively increased outbreaks of infectious zoonotic diseases like Covid-19.

In 1989 the United Nations established World Population Day which is observed on 11 July every year. The choice of 11 July was prompted by a milestone — the world population reaching five billion on 11 July 1987.

Each year World Population Day has a theme that highlights an issue relevant to global population. For example, in 2011 when the world population crossed the seven billion mark, the theme was on how to engage with and activate all seven billion people around the challenges related to our planet.

In 2020, the focus is on reproductive health and gender equality, and the UN has called for countries to attend to the "unfinished business" of the 1994 International Conference on Population and Development. The "unfinished business" is the recognition that achieving gender equality is essential if we are to achieve sustainable development.

Why is population growth and the associated issues such an important issue today? The magnitude of population growth has been colossal. It took the world hundreds of thousands of years (and modern humans about 10,000 years) to reach a global population of one billion. This milestone was reached in 1800. In the subsequent 220 years, the global population has grown to an estimated 7.8 billion. Linked to this growth has been massive changes in where people live.

For most of human history, people largely lived in rural areas. In 2007, the global urban population outnumbered their rural counterparts for the first time. The shift was considerable – in 1950 there were about three-quarters of a billion people living in urban areas, but by 2018 this had swelled to 4.2 billion. South Africa has followed this trend with more than two-thirds of South Africans now living in urban areas.

We are currently in the middle of a global Covid-19 pandemic, and in South Africa we are in month four of a series of strict lockdowns. Hundreds of thousands of people have lost their jobs, children have been out of school for months and entire industries lie dormant. In this context, one might legitimately ask how important is World Population Day, and of what relevance is it for our current situation?

The first reason lies squarely in the climate concerns the world now faces, which in turn have their roots in population growth and increased human encroachment on animal habitats. As is now accepted (outside of a marginal group of climate change deniers), massive industrialisation in the past 200 years has resulted in significant environmental degradation.

The environmental catastrophe we may face (referred to as a Sixth Extinction by Elizabeth Kolbert (Kolbert, E. The Sixth Extinction: An Unnatural History. 2014. Henry Holt and Company) is a direct consequence of human activity resulting in massive increases in greenhouse gases which have led to temperature increase, shrinking glaciers and more frequent extreme weather events. The impacts of climate change are numerous, but a significant one has been the increasing displacement of people.

The current pandemic has shone a terrifying spotlight on human vulnerability and has shown up our human arrogance and our delusional sense of superiority and dominance over the natural world.

A big part of this, as I have argued, has been the shift from rural to urban centres, but increasingly it is linked to climate shifts and weather events. For example, in Bangladesh it has been estimated that by 2050 one in every seven people will have been displaced by climate change.

"Climate migrants" are only one of the examples of how population movement is putting further pressure on already vulnerable cities, forcing an ever-increasing expansion into previously remote animal habitats and "wild areas". Rapidly expanding cities are devastating wildlife to the point where we are losing our biodiversity at a rate 1,000 times that in pre-human times. The total mass of wild animals has been reduced by more than 80%, while plant mass has been reduced by 50%.

One consequence of this is that the wildlife that remains has had to adapt to living in a new proximity to human beings. These new "intimate" configurations, and the increased contact between humans and wild animals, has massively increased outbreaks of infectious zoonotic diseases.

Zoonotic diseases are those caused by pathogens such as viruses, bacteria and fungi that are transmitted to humans by animals (David Quammen. Spillover: Animal Infections and the Next Human Pandemic. 2012. W. W. Norton & Company). Covid-19 is only the most recent example of this, and while we are yet to track the specific animal where Covid-19 originated, that it originated in an animal is in little dispute.

One of the conundrums of climate breakdown is that what is happening is not immediately visible and appreciating what is happening requires a long-term view that may be difficult for many. Act now to mitigate consequences in 20 years. Take a hit economically now so that your grandchildren will be in a better economic position than they might otherwise be.

A possible (beneficial) consequence of the current pandemic is that the reality of our encroachment, and the resultant diseases that we are going to be at risk of suffering from, is going to be increasingly difficult to deny or rationalise away. Added to this, we are also now beginning to see the shifts and changes at a much more personal level. There is increasing evidence, for example, that as temperatures rise, pregnant women exposed to higher temperatures and pollution are more likely to have a child that is premature, underweight or even stillborn.

Finally, as the environment degrades, breadwinners (in poor countries often men) increasingly leave agricultural areas, out-migrating in order to seek work. This leads to an increase in the workload of women as well as reducing their access to resources. And in the aftermath of extreme weather events and disasters, it is women who assume the burden of care for family members. This further limits their capacity to seek and engage in paid work.

The current pandemic has shone a terrifying spotlight on human vulnerability and has shown up our human arrogance and our delusional sense of superiority and dominance over the natural world. The world has been shut down by a minute virus (0,000065mm in diameter), and we are at a loss about the way forward. Our current predicament offers an opportunity to "build back better", and to acknowledge our interdependence with one another as well as the natural world.

If we fail to heed the lesson, future pandemics and climate breakdown will make our current Covid-19 pandemic seem like a bit of a walk in the park.

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https://www.dailymaverick.co.za/article/2020-07-06-covid-19-a-terrifying-glimpse-of-a-future-where-overpopulation-and-climate-crisis-overwhelm-earth/

LOCKDOWN

In This Section

Decisive and strong leadership and intersectoral action from South Africa in response to the COVID-19 virus

To the Editor: South Africa (SA) reported its first case of coronavirus disease 2019 (COVID-19) on 5 March 2020. For the 14 days from then until the time of writing (5 - 19 March), we have seen decisive, strong leadership from the President, and significant, important, and necessary co-ordination between different ministries including Education, Justice, Health, Trade and Industry, Transport, Public Works and Infrastructure, Finance, Cooperative Governance and Traditional Affairs, and International Relations and Cooperation. In these 14 days, SA has rapidly produced and implemented a number of action items (Table 1). This intersectoral action and co-ordination is something that has been needed for a long time to address development in SA. On 19 March 2020, the Competition Commission published a COVID-19 block exemption for the healthcare sector.[1]

The exemption is aimed at promoting co-ordination, sharing of information and standardisation of practice across the entire healthcare sector. It also seeks to facilitate cost reduction measures, in particular costs of diagnostic tests, treatment, and other preventive measures. Finally, the exemption seeks to promote agreements between the National Department of Health and the private sector, with the sole purpose of making additional capacity at healthcare facilities available to the public sector and ensuring adequate medical supplies. COVID-19 has dramatically highlighted the need for a significantly more integrated healthcare system.

The Health Market Inquiry (HMI) made recommendations that will promote standardisation and knowledge sharing as well as a method to deal with pricing within the functions of the proposed supply-side regulator. Perhaps this exemption can build trust between players and will ease us into a more rational and integrated healthcare system. Evidence from the HMI showed an excess capacity of high-care and intensive care unit (ICU) beds in the private healthcare sector, and the HMI concluded that there was inappropriate use of these beds.[2]

To free up private sector ICU beds will require the private sector to change its criteria of how they are used. Hospitals will also have to improve general ward care if this is one of the reasons doctors prefer to admit to an ICU, as was reported to the HMI. Improving general ward care will improve efficiency to the benefit of all. Another area that requires coherence between the public and private sectors is COVID-19 testing. Public sector testing at the moment is in our opinion correctly restricted to individuals who meet the case definition. A live broadcast of a question-and-answer session organised by the South African Medical Association and the Minister of Health revealed that general practitioners were inundated with requests for testing that the GPs thought was not indicated.

There were also reports that some employers demanded that employees arrive at work with a confirmed negative test result. This is irrational – a negative test today does not mean a negative test tomorrow – and furthermore it is not constitutional. SA's experience with HIV testing has confirmed the unconstitutionality of demanding people's confidential medical results through the courts. Education of some employers is clearly required.

Over and above this, testing the worried well for COVID-19 is a waste of resources. We should not be naive and must consider that profiteers both from the public and private sectors, in equal measure, may try to take advantage of this situation. Oversight of the resources that are being invested in protecting SA from the COVID-19 virus must be exercised. The threat that COVID-19 presents has resulted in leadership from government and apparent willingness of all South Africans to play their part. However, SA faces just as real a threat to its health, its economy, and its development: the crises of poverty, inequality and unemployment are the social determinants that threaten our wellbeing as individuals and as a society at large. We would have a healthier country if we could demonstrate the same degree of intersectoral action and social mobilisation across the public/ private divide in the form of meaningful social compacts. There are excellent lessons to be learnt here, and this opportunity should not be wasted. Lungiswa Nkonki Department of Global Health, Division of Health Systems and Public Health, Faculty of Medicine and Health Sciences, Stellenbosch University, Cape Town, South Africa lnkonki@sun.ac.za Sharon Fonn School of Public Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa.

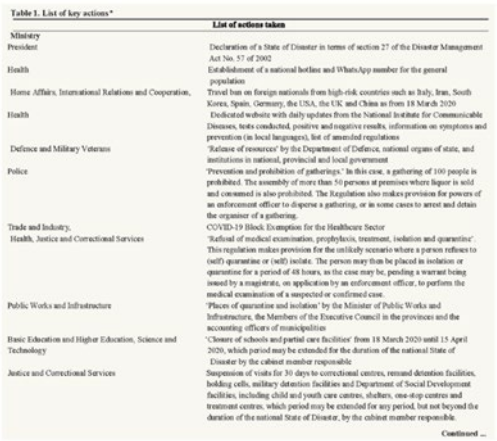

Table 1. List of key actions*

Ministry	List of actions taken
President	Declaration of a State of Disaster in terms of section 27 of the Disaster Management Act No. 57 of 2002
Health	Establishment of a national hotline and WhatsApp number for the general population
Home Affairs, International Relations and Cooperation,	Travel ban on foreign nationals from high-risk countries such as Italy, Iran, South Korea, Spain, Germany, the USA, the UK and China as from 18 March 2020
Health	Dedicated website with daily updates from the National Institute for Communicable Diseases, tests conducted, positive and negative results, information on symptoms and prevention (in local languages), list of amended regulations
Defence and Military Veterans	'Release of resources' by the Department of Defence, national organs of state, and institutions in national, provincial and local government
Police	'Prevention and prohibition of gatherings.' In this case, a gathering of 100 people is prohibited. The assembly of more than 50 persons at premises where liquor is sold and consumed is also prohibited. The Regulations also makes provision for powers of an enforcement officer to disperse a gathering, or in some cases to arrest and detain the organiser of a gathering.
Trade and Industry,	COVID-19 Block Exemption for the Healthcare Sector
Health, Justice and Correctional Services	'Refusal of medical examination, prophylaxis, treatment, isolation and quarantine' This regulation makes provision for the unlikely scenario where a person refuses to (self) quarantine or (self) isolate. The person may then be placed in isolation or quarantine for a period of 48 hours, as the case may be, pending a warrant being issued by a magistrate, on application by an enforcement officer, to perform the medical examination of a suspected or confirmed case.
Public Works and Infrastructure	'Places of quarantine and isolation' by the Minister of Public Works and Infrastructure, the Members of the Executive Council in the provinces and the accounting officers of municipalities
Basic Education and Higher Education, Science and Technology	'Closure of schools and partial care facilities' from 18 March 2020 until 15 April 2020, which period may be extended for the duration of the national State of Disaster by the cabinet member responsible
Justice and Correctional Services	Suspension of visits for 30 days to correctional centres, remand detention facilities, holding cells, military detention facilities and Department of Social Development facilities, including child and youth care centres, shelters, one-stop centres and treatment centres, which period may be extended for any period, but not beyond the duration of the national State of Disaster, by the cabinet member responsible

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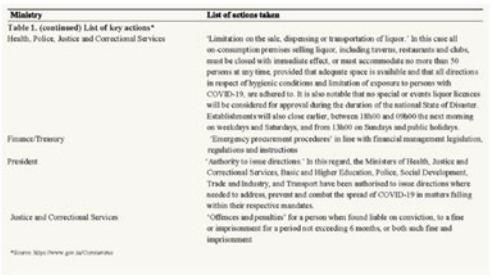

Ministry	List of actions taken
Table 1. (continued) List of key actions*	
Health, Police, Justice and Correctional Services	'Limitation on the sale, dispensing or transportation of liquor.' In this case all on-consumption premises selling liquor, including taverns, restaurants and clubs, must be closed with immediate effect, or must accommodate no more than 50 persons at any time, provided that adequate space is available and that all directions in respect of hygienic conditions and limitation of exposure to persons with COVID-19, are adhered to. It is also notable that no special or events liquor licences will be considered for approval during the duration of the national State of Disaster. Establishments will also close earlier, between 18h00 and 09h00 the next morning on weekdays and Saturdays, and from 13h00 on Sundays and public holidays
Finance/Treasury	'Emergency procurement procedures' in line with financial management legislation, regulations and instructions
President	'Authority to issue directions.' In this regard, the Ministers of Health, Justice and Correctional Services, Basic and Higher Education, Police, Social Development, Trade and Industry, and Transport have been authorised to issue directions where needed to address, prevent and combat the spread of COVID-19 in matters falling within their respective mandates.
Justice and Correctional Services	'Offences and penalties' for a person when found liable on conviction, to a fine or imprisonment for a period not exceeding 6 months, or both such fine and imprisonment

*Source: https://www.gov.za/Coronavirus

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COVID-19: What happens after the lockdown?

The epidemic won't disappear by 17 April. We have merely bought three weeks breathing space to plan for the future.

Those of us trying to model the COVID-19 pandemic should try to be humble; there is more we don't know than we do. Anyone who claims to know what the infection or mortality rates are for this disease is either deluded or dishonest. But, with time-tested scientific analysis, some things are predictable: on 17 April, after three weeks of lockdown, the sun will rise in Cape Town at 07:10, and we will still be at the start of a COVID-19 outbreak.

Although our current three-week lockdown will temporarily suppress transmission in the South African epidemic, it won't eradicate it, and if we just go back to business as usual, we will have endured the lockdown for nothing.

Usually, viral outbreaks, like flu, peak and subside long before everyone gets infected. The network for transmission becomes thinned, and transmission just can't be sustained. This thinning has many potential contributing factors: for most viral infections, people acquire substantial immunity from infection, so once they recover (sometimes quite quickly) they no longer contribute to spread.

Of course, people may also adapt their behaviours if they see a severe outbreak around them – but even without changes in behaviour, there are natural reasons for epidemics to die out. This pruning of the transmission tree, however, relies on a substantial fraction of people getting at least a brush with the infection – and it is from the study of seasonal flu and similar viruses that people have been circulating some alarming estimates of how many people might contract the new coronavirus. Indeed, a scarily large number of people would need to be infected for there to be a collective "herd immunity" that would make any residual transmission dwindle away harmlessly.

Even in severe COVID-19 outbreaks like in Wuhan, only about 1% of the local population was ever infected before draconian measures pretty much shut down transmission. While restrictions are now being eased, the population is almost as susceptible to a re-ignition of the epidemic as it ever was, and any reintroduction of infection to Wuhan would be just about as dangerous as the initial outbreak.

So, the question is, what do we do after 16 April? This is a political, not a purely technical, question – though there are technical aspects to understanding what will be happening as we try to get out of a strict lockdown to something more sustainable. I don't think epidemiologists necessarily have the insights or creativity to come up with the answers, but we can suggest some of the important things we will have to consider and debate. Between quasi-incarceration and going back to how things were, there is a wide spectrum of measures, and infinite scope for creativity. Here are some questions to ponder:

Post-lockdown, how do we monitor if the epidemic is getting out of control again, and how do we then respond?

If there is a rapid escalation in cases, or hospitals begin to get overwhelmed, do we enter another lockdown? How many lockdowns can we endure before unemployment and the slowdown in the bare bones basics of the economy becomes even worse than a massive but transient epidemic? How do we conceive,

implement and monitor meaningfully distinguishable levels of social distancing, and how do we step back, cautiously but with some urgency, from the brink of total stagnation?

How do we scale up testing to the level at which it plays a real role in controlling the epidemic?

In South Korea there is continuous mass testing; over 400,000 tests have been conducted compared to about 35,000 in South Africa (our populations are similar sizes). As soon as infected people are identified, they have to go into isolation until they've recovered. This has helped keep the epidemic manageable and maintain standards of care for those who experience acute illness – so mortality rates are low. How do we adapt this to our informal settlements, infrastructure, and finances? We need rapid, simple, cheap, and reliable tests to become available here, and fast.

What social distancing measures can be maintained for the long term?

Should people who can work from home continue to do so by default? Should restaurants remain closed except for takeout? Can we encourage online grocery shopping? Do airports remain open only for essential travel and goods? What public transport rules will be instituted? How do we even begin to implement social distancing in high-density shack settlements? Or could this epidemic be the impetus to finally address the housing crisis, or, indeed, the land question?

What do we do about schools?

Perhaps a handful of schools can implement sustained distance-learning, but this is impossible for township schools, and even schools in middle-class areas. Perhaps we have to accept that the school year must be cancelled and that a cohort of children will matriculate 12 to 18 months later (or whenever the pandemic has passed). But without schools and feeding schemes, many children will go hungry unless something creative is done. Alternately, if we restart schools soon, can the youth show us how they wish to adapt their environment to take care of their futures?

What steps can be taken to prepare hospitals, both public and private?

Perhaps the main benefit of the lockdown is that it is giving intensive care units an opportunity to prepare for a spike in cases. The impressive crisis-driven adaptations we have seen in other countries may not be replicable here, but it is clear the trenches of this proverbial war are the high care settings of formal healthcare facilities. The pressure COVID-19 puts on health systems is not primarily about people dying. The challenge is that many of those who become really ill can, in principle, benefit hugely from effective care – but they will not get much care if the system is overwhelmed.

How do we support the economy?

A virtual who's who of local economists have written a compelling letter to President Ramaphosa, with key proposals to mitigate the economic fallout of both the epidemic itself and the ongoing and coming social countermeasures. Engaging seriously, and transparently, with these proposals is now a matter of great urgency.

If we just go back to normal after 16 April, then all that will have been bought, at some pretty awful costs for the more vulnerable in society, is a few weeks delay of a terrible disaster. But a continuous lockdown will obviously also have devastating effects, especially on people living in informal settlements, who are somehow expected to stay confined to their shacks 24 hours a day, except to stand in long queues for social grants and groceries. Jobs have evaporated, women are stuck at home with desperate disgruntled men, and children are forbidden to run around outside unless they live in the plush suburbs and have gardens. This seems almost like pointless cruelty; a heavy-handed over-reaction to the fear that more nuanced social distancing will somehow necessarily fail.

We are facing extremely difficult questions, and we surely won't find "the right" answers to them, except in a few cases, and even then, probably only with hindsight. But we need to begin to explore these questions now and make choices even before the end of the lockdown, so that the next steps are neither rank guesswork nor political expedience.

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https://www.groundup.org.za/article/covid-19-what-happens-after-lockdown/

We'll have to build a post-COVID-19 world together

In a gripping poem, Warsan Shire narrates how, one night, she was sitting with an atlas on her lap with her fingers running across the world while she whispers the question, "where does it hurt?". In return, the atlas answered "everywhere, everywhere, everywhere".

Since discovering Shire's poem, I used it as a lens on people's experience of the current context we are in. Not a day goes by without an update on the statistics of the coronavirus sweeping wildly through countries, communities, and households. Nor can we avoid the scenes playing out in hospitals, the mourning of the bereaved and the preparation of graves for what is yet to come. Where does it hurt? Everywhere.

Exactly two weeks after the death of George Floyd in Minneapolis, I used it to open an online workshop on values. Not only did this group of men and women associate the poem with the rising tide of anger and grief across the world, for them it ripped open their own painful memories of what apartheid did to them, their families, and communities. Where does it hurt? Everywhere.

In a workshop with a group of executives from one of South Africa's leading retail groups, I listened in on their narratives of coming to terms with the impact of Covid-19. The initial business projections for 2020 turned into a nightmare as budgets had to be revised while doing everything possible to soften the impact for employees, suppliers, tenants, and customers. Where does it hurt? Everywhere.

Dealing with students in a remote learning environment becomes a window into their domestic challenges during lockdown. For some, job loss is already a reality. Many have to cope with work, their studies and familial responsibilities at the same time. Some had to alter their wedding arrangements while others are dealing with bereavement in their families and social networks. For many it feels like a curtain has been drawn on their future plans. Where does it hurt? Everywhere.

Not in the script

Covid-19 was certainly not in our script for 2020.

Suddenly it has become the code word for an all-encompassing experience of change and loss sweeping through everything that previously felt familiar, comforting and even predictable. Life as we were used to, has been extensively disrupted, whether we look at it from an individual, relational, organisational, or societal perspective. It will not be an overstatement to say that we are a society in grief at the moment. It hurts everywhere.

Tough as it is, it may do us well to make to make sense of what we experience at the moment. One way of looking at it, is from the perspective of Elisabeth Kübler-Ross's, model of what people experience around death and dying. Although her idea of a grief cycle as such has been criticised by many, there is sensibility in the five core emotions that she identified.

- *Denial* is often the first response and expressed in the assumption that something is either not true, or as bad as reported.
- *Anger* represents the desire for a scapegoat, the possibility that something or someone is to blame for the challenge that you are facing.
- *Bargaining* is to look for a way, some sort of compromise, to avoid or soften the impact, to be able to continue with what you were always used to.
- *Depression* represents a despairing realisation that the crisis will not dissipate, that circumstances will not change, that the change is permanent and that there will be no turning back to what was before.
- *Acceptance* is about embracing either the loss or the inevitable change that is going to occur, making peace with what you cannot change, and focusing on that which you can influence or have some control over.

Making the Covid-19 connection with the Kübler-Ross framework is not difficult. Since the start of the pandemic, and especially since the announcement of lockdown, you may have experienced some or all of these emotions as well. You may have experienced some sort of sequence, going from the one to the other as if they represented stages in your experience. You might have experienced different ones at different times depending on what kind of Covid-19 related impact you have been dealing with. You may find yourself somewhat stuck with a particular one, due to a variety of challenges you have to deal with at the same time.

Applying the Kübler-Ross framework, we may say that we experience these emotions because of grief resulting from loss: loss of future certainty, loss of employees, loss of suppliers, loss of income, loss of normal connection and socialisation, loss of life, loss of freedom, loss of dreams. Where does it hurt? Everywhere.

The sixth element

So how do we make meaning of the Covid-19 challenge? David Kessler, a world-renowned expert on grief work, co-wrote with Elizabeth Kübler-Ross and

added a sixth element to her framework, namely meaning.

In this context meaning refers to coming to terms with and integrating the impact of the change or loss and finding new courage and direction for what may be yet to come. In discussion with a group of Harvard Business Review staff, Kessler said that "acceptance is where the power lies".

Once we have accepted what is, we can start working on a balanced approach in terms of what we think and do. We can take precautions for not getting affected, we can appreciate the things we still have access to, we can reach out to those who are sick or suffering bereavement, we can use technology to stay connected, we can share and help others as well to express the emotions that we are feeling.

Tools for business leaders

It hurts everywhere. There is no use in fighting or denying it. But we can make meaning through how we deal with it. In a webinar aimed at leaders and managers in business, I shared the following guidelines:

Make sure that you have those things that provide the foundation of your organisation under firm control. Inasmuch as it is under your control, plan carefully, stay creative, spend wisely. You and your people need this for stability.

- Make sure that you stay in touch with every individual, even daily if you can, so that you may know where they are, how they are, what they experience, what they can or can't cope with. This is not just about their continued performance, but about their personal and relational wellness. They need to know and feel that you really care.
- Do not try to talk people out of how they feel, or prescribe to them how they should feel, or sell them cheap comfort. If you do this, you only create unnecessary distance and resistance. You may have felt the same and now it is your turn to take them seriously and show them that you understand what they are going through.
- Be prepared and available to be cared for by your team members as well. There may be times some of them may be better equipped to deal with certain emotions and experiences than you are. There may be challenges that some of them have already worked through that you still need to deal with. Allow them to be helpful.
- Maintain the necessary safety disciplines, keep the workplace clean, make sure everyone washes their hands, wears masks, and keeps the right distance. Keep the virus out; once it is in it is already too late.

It hurts everywhere. Life will never be the same again. We will have to rebuild our dreams for ourselves, our communities, society and the economy.

Inasmuch as we are hurting together, even if in different ways, we'll have to learn how to rebuild together. While the pandemic, and its related effects, will leave us with an indelible collective sense of grief, it can also become the rebirth of imagination for a better, more balanced, and more compassionate world.

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https://www.sun.ac.za/english/Lists/news/DispForm.aspx?ID=7434

Distance, Dose, Dispersion: An experts' guide on Covid-19 risks in South Africa and how to manage them

Understand the three things that can make the most difference to easing the lockdown and reopening South Africa with the least risk, whether you are using a taxi, socialising, working, working out, or running a shop.

Our lives have been turned upside down by the coronavirus pandemic and by the lockdown, and further confused by shifting information. You might be wondering about the role of masks, whether to wipe down your groceries, and if the lifting of lockdown means we can all relax now. You might have concerns about how you can safely travel to work, what steps to take as you reopen your business, whether to attend a religious gathering, or what to tell your grandmother about how to stay safe.

It has become clear that some countries in Asia and Europe rapidly contained their epidemics through simple and relatively easy behaviour changes, rather than

relying on changes in immunity or prolonged lockdown strategies. Our aim here is to share some basic essentials about how to minimise risk. Nothing is risk-free (for example, we take risks getting into cars, buses or taxis). But we can manage risks, which requires understanding how they intersect and amplify each other. It turns out that with this new coronavirus, open windows, masks and physical distancing are more important than obsessive hand sanitising and temperature taking.

Understand that we may be in for a long haul, adjusting our lives for at least the next few years. Some of these changes may be permanent (and may be things we should have done anyway, for TB and seasonal 'flu). We need to enable businesses to survive, our institutions to open as safely as possible, while we live our lives as naturally social animals.

We cannot be saved by government policy alone – the things we can all do are what will save South African lives. And those things are pretty simple.

Our Summary:

Do everything possible Outdoors;

Open Windows;

wear Masks;

keep at least one metre Distance (two metres is better) from people,

Avoid Crowded spaces,

be Quick.

What causes the problem?

The way the virus spreads is that when we cough, sneeze, talk, sing or simply breathe, we spray very small drops of moisture into the air; these are respiratory particles. If someone is infected, the live virus will be present in these particles. These particles in our breath can spray quite far (several metres). If there is poor ventilation and no air movement, they can hang around in the air. They can land on surfaces (where the virus may survive for some hours) and if you are close to someone they can land on your eyes, nose or mouth. Most people who become infected get the coronavirus by direct contact with an infected person. It is also possible, but less common, to be infected from touching your mouth, nose or eyes when your hands have the virus on them from touching a surface.

What is the impact of the three Ds?

Distance: The further away you are from someone who is infected, the less likely you are to be infected by them or to breathe in particles they have breathed out.

Dose: To become infected you need to have contact with a minimum dose, which takes time and exposure to people with the virus. The longer you are exposed to an infectious person, the more people you are exposed to, and the fewer barriers (like cloth masks) between you, the more likely you are to be exposed to the virus. People who have symptoms or are about to develop symptoms, including mild illness, are generally more infectious – i.e., are able to produce larger doses of infected respiratory particles.

Dispersion: Because smaller particles hang around in the air, the movement of air makes a really big difference. The particles disperse quickly if you are outside, particularly if there is a breeze or wind. We also know that sunlight breaks down the virus. Small, enclosed spaces with closed windows are high risk, especially when they are crowded.

The three Ds interact! If you are outdoors, at least one metre (but preferably two metres) apart from others, for less than 10 minutes, your risk of becoming infected is incredibly low. On the other hand, if you are stuck in a room with closed windows, with someone with symptoms, your risk of getting the disease increases, whether or not you wear a cloth mask. Large known outbreaks have arisen in indoor functions in churches, weddings, music events, and restaurants or bars: places where a crowd of people are indoors, close together and talking and singing for hours.

Businesses, factories, workers and families urgently need to pay attention to the interaction of the three Ds. Physical distancing is very effective when outdoors or for short encounters (10 minutes); once you are in a closed space, its effectiveness dramatically diminishes. Masks and two metres distance are not enough if you are with people in an unventilated space all day. Evaluate your office, place of worship, business, planned funeral or other event in terms of the intersection of the three Ds.

What can we do?

Physical distance: This is your major defence from infection. The good news is that although the virus spreads easily, short periods of contact will not get you infected. Passing someone in a supermarket, paying for your groceries, brushing past a runner in a park is no problem. But sitting in a taxi with closed windows, being alongside a sick co-worker at a workstation, or singing in a packed church, is.

Go for outdoors and open all windows: Outside air is your best friend, and we may all have to start dressing more warmly in winter as many activities move outdoors and windows stay open. Open windows whenever possible on public transport, in shops or at work. Unfortunately, the interaction of the three Ds means that taxi rides of more than 15 minutes are risky,

even if everyone is wearing a mask – unless the windows are open.

Businesses, factories, offices – look at your windows and work out how to get air flow. Open all windows and utilise outside space. Restaurants, bars and shebeens should consider outdoor seating wherever possible. Streets with a number of restaurants should inquire into closing the street a few evenings a week, or every day, and putting tables and chairs outside.

Socialise outside if you can, keeping a two-metre distance. An outside braai or picnic is much safer than visiting someone in their house. Avoid visiting people or being visited inside homes for more than a few minutes. Have work meetings outdoors, if possible. If you want to have a gathering, such as a religious gathering or funeral, do it outside if you can. An outside shebeen, with physical distancing, is far safer than an indoor shebeen with masks and obsessive hand washing. Outdoor sport is very low risk, unless involving close prolonged contact. (Even outdoors, don't talk to someone up close for long; maintain distance.)

Wear masks: There is now lots of evidence on the effectiveness of wearing cloth masks in the community. A cloth mask traps the virus-containing respiratory particles during breathing, coughing, or talking, and helps prevent them from moving away from the mask-wearer. (But why has mask advice changed? *See our comment at the end.) People who have very mild symptoms or are about to develop symptoms can spread the virus – this means that each of us might spread the virus unknowingly. If everyone wears a mask the amount of virus in the air is much reduced: we all protect each other. Therefore, you should always wear a mask whenever you are close to people other than those in your household, especially indoors. It is also vital that you wear your mask correctly – it must cover from the bridge of your nose to over your chin at all times. Wash your mask daily with soap or detergent.

Offices, factories, banks, shops, malls, government services – any indoor space where people come into contact – must require everyone to wear masks. Employers should distribute reusable cloth masks to employees. Reusable cloth masks should be distributed in communities where people can't afford them.

As important as masks are, in an indoor space they are not a substitute for ventilation and distancing – you need all three.

Work in homes: If you work in someone's home (domestic workers, plumbers, etc) or someone comes in to work in your home, insist on windows being open and don't be in rooms at the same time as them for long. Wear a cloth mask, carry, and use your own hand sanitiser, and keep your distance.

Soap and surfaces: The virus is incredibly fragile, and washing your hands with any soap for 20 seconds kills the virus. Make soap and water (or hand sanitisers with an alcohol solution of at least 70 percent) as widely available as possible at workplaces, malls, shops, transport and offices. Soap works much better than alcohol-based sanitiser, is cheaper, and will result in less cracked hands. Invest in mobile handwashing stations in areas with a high concentration of people, like hospitals and clinics.

It is unclear how likely you are to contract the virus from surfaces, but it is wise to clean commonly touched workspaces and public areas often. Minimise touching and wipe down frequently touched surfaces – like door handles, lift buttons, railings, credit card machines. The virus dies quickly on surfaces; in laboratories it has been found in low doses beyond 24 hours on plastic and steel (but not on porous surfaces such as park benches, or grass). Whether this is enough virus to infect you is unknown, but surface transmission is very unlikely to be the major way you will be infected. Washing your clothes after going out, or washing your car, and wiping all your groceries is not necessary; just wash your hands and keep surfaces around you clean and dry.

If there is an outbreak in a venue, or an employee tests positive, wiping surfaces down with soap and water, followed by bleach, or other common disinfectants, is very effective in removing any viral particles that may still be present. And if you can leave the venue open and ventilated for 24 hours, this should be enough. There is no need for special chemicals, or "deep cleansing" or "fogging" or "disinfection tunnels"; they are no more effective than soap and water, and are associated with other health risks, including making asthma, eye and skin conditions worse. There is no need to shut down a facility for days; once surfaces have been cleaned, dried and disinfected, and spaces ventilated, work can continue.

Gloves are unnecessary for most people: you still need to wash them so you may as well just wash your hands. The one exception may be someone who handles lots of items – like a dishwasher or a cashier, where exposure may be higher (and they must wash their hands after taking the gloves off).

Air-conditioning: Employers, businesses, restaurants, offices: understand your air-conditioning system. A system that recirculates air is very risky and has been linked to several call centre and restaurant outbreaks. You are essentially guaranteeing that everyone breathes everyone else's air. On the other hand, an air-conditioning system that extracts air and brings in air from outside makes an indoor space safer. But simply opening windows, where possible, especially if combined with use of a fan, may be more effective if it increases the movement of air. If well ventilated, a room can be

safe in minutes, even if someone is coughing and highly infectious.

Hours: All shops and businesses that can extend opening hours to reduce crowding should do so. Limit the number of people in shops. Lines on the floor to signal distancing requirements have been very successful. Consider discounts for coming in at unpopular hours. All shops should consider having a pensioner-only (or also people with a health-risk note) hour at the beginning of the day. Older people, and people with diabetes, hypertension, HIV, cancer and obesity may be more at risk (we are still learning about the extent of risk) and enabling them to shop when it is least crowded, and when other people have not yet been into the shop, helps protect them. Consider leaving hotel rooms empty and ventilated for a day after someone leaves and ask guests to open the windows when they leave, to protect cleaning staff. Factories, mines, offices, and other workplaces should consider staggering work hours or days so that not every employee comes in at the same time or on the same day. Take turns in lifts (and always wear cloth masks). Tea and break rooms must be well ventilated and break times staggered to reduce crowding.

Family: We are social creatures; we need human contact. Many extended families have regular get-togethers. Unfortunately, if you are indoors with people who don't live in the same home, you are seriously increasing the risk of spread to your family. Even if you know who each person has been in contact with in the past two weeks (and you may not), one person who was exposed in a shop or transport or work, who is not yet showing symptoms, can expose a whole extended family, who can then expose everyone they work with. A high percentage of people are infected in their own homes and take the virus to work. In China, many infections occurred in the home, so homes with vulnerable members in them should consider wearing masks at home. Meet outdoors wherever possible.

We know that children are much less likely to be infected with the virus and even when infected have no or mild symptoms. Going to school is unlikely to be dangerous for them (though schools have to think about protecting teachers). Children are probably also less likely to pass it on others. But sadly, you still may want to hold off from children hugging vulnerable grandparents for a while. One of the hardest parts of the lockdown has been stopping children from playing together. There is no easy answer here. From current knowledge it seems that there is likely to be some risk, and children's behaviour when they are together is a challenge to all three Ds. If children play together, encourage outdoors, masks or face shields and lots of handwashing (before, during and after). Consider who they come into contact with at home (an elderly grandparent, someone with diabetes) when deciding about play arrangements. Perhaps discourage hugging and kissing.

Personal risk factors: People of all ages and levels of health have become very ill and have died of Covid-19. But we know that some people are at much higher risk than others. The most significant risk factors for being badly affected are older age (especially over 65), diabetes, hypertension, HIV, uncontrolled asthma and obesity. If you or your family member has one of these factors, consider getting someone less vulnerable to do the shopping, consider going to shops at opening time, before anyone else has been in them. Vulnerable people should avoid taxis, trains, buses and gatherings if they can.

Protect others: Stay home if you have any of these symptoms: a fever, a cough, body aches, difficulty breathing, loss of sense of smell or taste. Encourage workers to stay home if they have these symptoms. When you are not at home, wear a cloth mask to protect others, especially indoors. Wearing a cloth mask protects other people – and they protect you.

When should you test? Getting a PCR test for coronavirus is less useful than many people think. A test that comes back negative does not mean you don't have the virus; it has a very high "false-negative" rate – almost a third of tests. Unless you need hospital care (in which case you will be tested), the test won't affect how you look after yourself, and if you have symptoms, you should isolate anyway as you may be infected.

How should you isolate? If you have symptoms or have been in close contact with someone who has tested positive, try to self-quarantine. Once you understand the three Ds, self-quarantining is not difficult to understand. If living with people, try to spend time in a room on your own or spend time outdoors. Try to avoid communal spaces wherever possible; when you can't avoid using these (the kitchen or bathroom), try to spend as little time as possible, wipe surfaces, wear cloth masks, and open windows.

Public toilets: There is some evidence that flushing a toilet sprays particles in the air which can have the virus in them. Tell customers, employees, and passengers on planes to put toilet seats down before flushing. Consider adding signs in all public restrooms with this message.

What about thermometers? Thermometers, especially the "point at your forehead" or oral ones, are actually very poor at telling your temperature, and may falsely create the impression that an infected person is not infectious. At a business or venue entrance they require close contact with the person with the thermometer. A person who has a fever from Covid-19 is likely to have other symptoms, so a simple symptom check is all you need.

Can you fly? Planes have very good air-circulation systems with particle filters that remove the virus from the air, which means that they are very low risk during the flight. But be careful of surfaces, and on short trips avoid the toilet if you can. You are far more likely to contract the virus in the airport while queuing, or waiting in a lounge or restaurant, than on the plane.

Communicate: Have clear communication about how to manage risk at work. Managers and policy advisers should realise that although policies need to be clear and not too complicated, at the same time advice that is nuanced but actually doable has better results than advice that is very simple but unrealistic in practice. Compare telling people they can prevent HIV by never having sex rather than by giving information about safe sex practices. The former is simpler but does not result in HIV prevention; it may be true but it doesn't help because it is not realistic. Businesses should anticipate they might have to shut down for a day and openly communicate.

No shaming: Don't judge or stigmatise people with Covid-19. Getting infected does not mean they were careless or have bad hygiene. Anyone can get infected, millions of people worldwide have been, and in South Africa, for every case diagnosed there are likely to be 10 others who have it but have not been tested and may not have symptoms; it may be you. A workplace may have an outbreak despite taking all necessary measures. There is no need to shout at people exercising outdoors without a mask but at a distance, or in the park with their family; they are not going to infect you. Be kind.

Take it seriously: Covid-19 is real! If we all act together and help each other, we can dramatically limit spread, reduce deaths, and protect our hospitals. Remember that anyone can get Covid-19 and become very sick. Those who were seriously ill can take a long time to fully recover. Even if you are not high-risk for severe illness, your actions create risks for others. Covid-19 is spreading rapidly in South Africa, and this is the time for more, not less, vigilance.

This is in our hands: Covid-19 is here to stay for a while and is rapidly spreading; but we need to live, to see each other and to work. South Africa had an early and strict lockdown, but we always knew we couldn't do this for long. The easing of the lockdown does not mean the threat of infection has decreased. In fact, the opposite is true. We must not give up on containing spread: there is a lot practically that we as individuals, commuters, workers, managers, and trades unions can do to protect ourselves and each other as South Africa reopens.

Why has information on masks changed? Early on we were advised not to wear masks, now we're told everyone should wear masks – what gives? Three things. First, as this new pandemic hit, there was a worldwide shortage of masks that healthcare and other emergency workers needed. It was more important for them than for the rest of us to get the masks, as they are more exposed, and also expose more people. Second, we were told initially that masks are more important for sick people than for protecting those not infected. This hasn't changed, but what has changed is understanding how much spread could be caused by people who have mild symptoms or do not yet have symptoms. This means that everyone is potentially a sick person who is spreading, and if we all wear masks, we limit spread. Third, the world is learning fast about this new disease: more information is emerging all the time about how much of an impact universal mask-wearing can have on reducing spread.

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https://sacoronavirus.co.za/2020/06/27/distance-dose-dispersion-an-experts-guide-on-covid-19-risks-in-south-africa-and-how-to-manage-them/

Three key drivers of good messaging in a time of crisis: expertise, empathy and timing

Not since World War II have people across the globe been so united in fear as now, when the COVID-19 pandemic dominates headlines and daily realities.

People are fearful of catching the virus and anxious about spreading it. And they're worried about its economic and social impacts. When people are scared, they look for expert advice which is relevant to their own situations. Therefore, virologists, epidemiologists and researchers who work on communicable diseases are in high demand on news channels. So too are specialists in data science who can model the spread of the disease. People also want to hear from social scientists, economists, and psychologists about the impacts of COVID-19 on our lives.

But this also means that people are constantly receiving information from many – and often conflicting – sources. They may feel overwhelmed by a deluge of data and

opinions. Facing information overload, they may find it difficult to decide what to read, who to listen to and who to trust.

Effective science communication during a pandemic, then, is literally a matter of life or death. This is neatly summarised by The US Centers for Disease Control and Prevention (CDC) in its advice on crisis and emergency risk communication:

During an emergency, the right message, from the right person, at the right time can save lives.

For science communicators to be effective, best practice principles need to be applied to the design of their messages, the choice of who conveys those messages, as well as the tone and timing of messages.

So, what are science communication experts saying at a time like this? Much of their advice is drawn from what communication experts have learned from earlier health crises. Their recommendations are also based on an understanding of risk communication principles, especially with regard to how they apply during a public health crisis.

Designing the right message

Designing clear messages requires a good understanding of the target audiences and what matters to them. The World Health Organisation (WHO) highlights that disease outbreaks can be alarming, disruptive and unpredictable. So it's crucial to understand and acknowledge the concerns of the people who will be receiving the message.

Research into what makes people care about science messages points out that people will only respond to "calls for action" if these are clear, meaningful and feasible. If you want people to wash their hands regularly with soap and water, you must help them to understand why hand washing matters, and how it can help to combat the spread of the coronavirus. You also must provide alternatives for people who may not have sufficient access to soap and clean water.

But it's important to keep it succinct: it's possible to over-burden people with information.

The current COVID-19 pandemic is an unprecedented case of public communication of science happening in a compressed time frame where scientists share new information as it comes to light. It is inevitable that expert opinion will be refined as scientists gain a better understanding of the novel virus we are dealing with. This means that transparency is a major factor. That includes admitting what experts do and don't know yet. The Centers for Disease Control and Prevention in the US advises communicators to be open and honest about uncertainties and acknowledge when they do not have enough information to answer a specific question.

Using visuals and infographics can be a powerful way of helping people to digest information and to connect with an idea. When it comes to designing posters and brochures, a bright, clear design with as little text as possible, along with clear branding, works best.

The right person, speaking with compassion

Understanding people's perceptions, concerns and needs also means identifying the people they most trust to deliver those messages. For example, community activists who are known and trusted locally have been found to be the best people to mobilise South African communities behind public health messages.

It is also crucial that trusted scientific experts, but also experts in local knowledge, are identified and supported to convey messages and explain uncertainties.

Top communication experts agree that it's important to show empathy when communicating about a crisis. This is underscored by research that underlines the importance of empathy.

Whoever communicates a message must assure people that their concerns and feelings are recognised and taken seriously. Never dismiss people as ignorant or irrational; rather try to understand why they respond or behave in ways that may not be in line with what scientists expect.

It may also help to build public trust if scientists themselves are willing to tell their own stories related to the crisis and acknowledge that they are also scared or concerned.

Timing is key

The WHO guidelines emphasise the importance of announcing new information as soon as possible, while also ensuring that messages are accurate and easy to understand.

This is a cornerstone to risk communication. But it's also important to be careful about reporting on scientific progress and raising people's hopes prematurely. An example is the public's reaction to suggestions that chloroquine could be a possible treatment for COVID-19.

New information about the incubation period and transmission process for COVID-19 and new treatments is emerging every day. Many of these studies are yet to be peer-reviewed and scientists are walking a tightrope between providing urgent answers and doing robust research. It is a vital part of science communication to explain how science works and is the reason it may sometimes take longer before scientists reach consensus and are able to give definite answers.

The COVID-19 pandemic reminds us starkly of how much we depend on science and scientific expertise for finding solutions to acute challenges. It also highlights the invaluable role of journalists and science communicators who are able to empower people with relevant, timely

and clear messages that help to navigate their lives during a challenging time.

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HTTPS://THECONVERSATION.COM/THREE-KEY-DRIVERS-OF-GOOD-MESSAGING-IN-A-TIME-OF-CRISIS-EXPERTISE-EMPATHY-AND-TIMING-135866

Behavioural science and its potential to guide our response to Covid-19

The response to the Covid-19 pandemic by the South African government has been excellent thus far – role modelling strong, rational, evidence-informed, empathic and coherent leadership. This can be boosted with active engagement and involvement of behavioural scientists in the implementation of the response.

South Africa is currently in week seven of one of the strictest lockdowns globally. The response by the South African government in March 2020 to the Covid-19 pandemic was guided by science and extensive consultation, and it was communicated clearly, empathically and was well supported by most South Africans. The public face of this was infectious disease, public health and clinical medicine specialists.

Compared to the response of the Donald Trump administration where the lessons of science were routinely downplayed and scientists scapegoated, the South African response was impeccable. Communication from the Minister of Health, Dr Zweli Mkhize and Professor Salim Abdool Karim, and other experts was clear, factual, provided up-to-date information about the virus, and outlined what could be done to stop or minimise transmission.

This role of these experts is key, and of course, must continue. However, we are now in a different situation than when we went into lockdown in March. After six weeks of lockdown, community transmission is increasing, with projections of anything up to 3,000 new infections per day by the end of August 2020.

While the lockdown has allowed the health system to better prepare itself, and to increase public education on how to limit transmission and prevent infections, are we changing our behaviour to ensure adherence to these prevention measures? Are environments designed to make it easier for people to follow prevention strategies?

In 1919, following the Spanish flu epidemic, with the global deaths of 50 million people, a paper in the journal Science (Soper, G. A. The lessons of the pandemic. Science 49, 501–506, 1919) concluded that: people do not always appreciate the risks they run; rigid isolation as a way of protecting people went against human nature; and that unknowingly, people acted in ways that endangered themselves and others.

Since then, what have we learned about changing behaviour? It turns out that behavioural scientists and experts know a great deal about this, and it is imperative that they move to be at the forefront of the government response.

Perhaps the most important lesson is that changing behaviour is extremely complex and difficult – even when personal risk is involved. For example, in the US (and a similar figure pertains elsewhere), over 70% of all illness and deaths can be linked in some way to five behaviours – smoking, alcohol, what food is eaten, how much food is eaten, and exercise (de Vol, R. & Bedrosian, A. 2007. An unhealthy America: The economic burden of chronic disease. Los Angeles, CA: The Milken Institute).

These are all behaviours that are to some extent modifiable and amenable to change (some more than others, of course). Yet countless people know how difficult it is to stop smoking, reduce their intake of alcohol, stick to a diet for more than a few weeks, eat healthy foods or to exercise frequently.

A crucial lesson has been that successful behaviour change requires more than just information. While information is key to improving knowledge, changing behaviour requires something more. One example of how information/knowledge moves to actual behaviour change is role modelling. President Cyril Ramaphosa, wearing a mask, clumsily getting it wrong in an empathic, humorous and human way, while physically distancing publicly are all key components of successful behaviour change.

Another illustration is the common method of receiving health information via social media or by text message. We know that people like receiving messages this way and the broad reach of the technology is key. However, the evidence also suggests that the use of passive social media messages (i.e only providing information) should be discouraged. When we use available technologies to ensure that messages received are rich in information, sent at times where uptake is most likely, and where some active engagement between those sending and receiving messages is possible, the likelihood of success increases.

Perhaps the most important lesson from other epidemics (such as Ebola) was how important involving the public in the decision-making process is. This is, of course, related to trust, but if people, local leaders, faith, and civic society leaders are involved in the decision-making process, adherence will improve.

We know that one way to improve adherence is through door-to-door outreach. Currently, most of the outreach that is happening is about testing. However, increasing numbers of people are refusing testing (as high as 30% in Soweto), because they fear being forced to self-isolate.

South Africa has tens of thousands of community health workers, a ubiquitous and well-respected workforce. We argue that they would be better deployed going door to door to hand out masks, educate households about hand washing, problem-solve ways to protect elderly family members, and to build the necessary trust so that people will seek out testing voluntarily.

We also know that when there is trust in government there is a greater likelihood of people adopting recommendations. Linked to this is the importance of open communication and acknowledging uncertainty. It is now widely acknowledged that Singapore's experience and success during the SARS epidemic was due in large part to transparency in communication.

The Singapore government was able to build confidence and trust with a transparent approach to communications that fully acknowledged uncertainty, thus allowing policy shifts and changes as the epidemic evolved.

Behavioural science also shows us how quickly trust can dissipate. Of particular resonance for South Africa right now is the issue of coercion and instances of Deciding whose lives really matter in a pandemicand police overreach. The more people are threatened and coerced as a way of trying to get them to comply, the more likely they are to feel that their trust in the government and the government's trust in them has been breached. Paradoxically, what then happens is that people drastically reduce their willingness to follow directives.

Another lesson we have learned about behaviour change has come from the field of behavioural economics. Nobel Laureate Richard Thaler and his colleague Cass Sunstein popularised the concept of "nudge" in their book Nudge: Improving decision about health, wealth and happiness.

Nudging is a way of redesigning environments (also known as modifying choice architecture), which assists in the process of aligning people's immediate choices with what they have rationally decided to do but may be finding difficult to always remember and act on.

Importantly, nudges are subtle, do not involve outright persuasion and certainly do not involve bans or legislative regulation. Paradoxically, people should be easily able to avoid a nudge. Putting fruit at eye level, for example, to increase fruit consumption counts as a nudge. Taxing sugar to reduce consumption is not a nudge.

Examples of nudges in the current pandemic would be to place large pictures of the coronavirus throughout public toilets to encourage hand washing, placing alcohol-based hand sanitisers where they are visible as well as markers on the floor to assist with physical distancing. In essence, nudging is about creating enabling environments to help change behaviour.

In a pandemic, fear and anxiety are, of course, predominant emotions for many. Fear and anxiety are not emotions that allow people to (necessarily) rationally and logically plan their responses and behaviours in ways that we as public health practitioners would like.

The Nobel Laureate Daniel Kahneman has developed a two-system theory for how people process information. In the first system (Thinking Fast), processing is automatic, fast and highly susceptible to influences from the environment. In system 2 (Thinking Slow), processing is more reflective, much slower and takes into account goals and intentions (Daniel Kahneman, Thinking Fast and Slow, Farrar, Straus and Giroux, 2011).

If we believe that what happens in planning a response to a pandemic or anything, is that people hear information, then rationally and logically plan their behavioural response, we are missing perhaps the largest piece in the puzzle. In fact, a big part may be instinctive, automatic, and unconscious. This was clearly seen in some initial responses to the pandemic when people began hoarding face masks.

Our safety in this pandemic is as dependent (if not more) on everybody else wearing masks as it is on us having enough masks for ourselves and our families. But the environmental cues that people were receiving were about danger, panic and there not being enough masks resulting in a rush to buy face masks. Behavioural science has shown us when people are fearful and anxious, they will act to achieve a measure of control and safety and may do this quite rationally and logically. But if they continue to feel scared and helpless, they may well respond with defensiveness or anger.

Finally, the "Behaviour Change Wheel" is a way of understanding how behaviour can be changed. It consists of three elements. Firstly, individuals must be able to undertake the behaviour (if you have no access to soap, water and/or sanitiser), you will not be able to wash your hands. Secondly, the environment has to facilitate the required behaviour (self-isolating in a one-roomed shack shared by six people is completely impossible). Finally, people must be confident that they can make the required changes (have a sense of agency and self-efficacy in the world).

The extreme poverty and inequality that characterises South Africa massively impacts on whether people are able to, in fact, act on recommendations.

The Covid-19 response to the pandemic by the South African government has been excellent thus far – role modelling strong, rational, evidence-informed, empathic, and coherent leadership. This can be boosted with active engagement and involvement of behavioural scientists in the implementation of the response. A leadership that says we responded, we have learned, and we are adapting our response to a transdisciplinary approach to ensure we do everything we can to respond to the pandemic.

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HTTPS://WWW.DAILYMAVERICK.CO.ZA/ARTICLE/2020-05-15-BEHAVIOURAL-SCIENCE-AND-ITS-POTENTIAL-TO-GUIDE-OUR-RESPONSE-TO-COVID-19/

What we have learnt: 19 lessons from the Covid-19 pandemic

The Covid-19 pandemic has been a tough teacher, and we are still learning. We have learnt many lessons, among them, we forgot to feed our children. Oh, and we forgot to feed our children.

South Africa is now in Level 1 lockdown. Other countries are also loosening restrictions, while some are moving in the opposite direction – imposing stricter lockdowns following some respite during the northern hemisphere summer. As we emerge from our own catastrophic six months, I offer 19 lessons from the Covid-19 pandemic:

We forgot to feed our children. Let me say that again – we forgot to feed our children. When we went into a hard lockdown in March and schools were closed, school feeding programmes also came to a halt. What this meant for thousands of children across South Africa was that they lost their most nutritious meal of the day. Not only did we fail to make a plan, but it took court action to force the government to find ways to extend the feeding scheme.

When President Cyril Ramaphosa addressed the country on 23 March 2020 and announced the lockdown, support from South Africans was near total. He was empathic, the messaging clear: his manner communicated that we were all in this together.

Unfortunately, this did not last long with the suspension of Communications Minister Stella Ndabeni-Abrahams for breaking disaster regulations barely two weeks into lockdown, while Nkosazana Dlamini Zuma continued to clumsily and repeatedly defend the inane and pointless tobacco ban. The horrific death of Collins Khoza at the hands of SANDF soldiers and the arrests of 250,000 people in the months that followed only hastened the rapid shift from cooperation to scepticism and, finally, to anger.

The pandemic has ravaged our poor communities in terms of infection, death, unemployment, poverty, hunger and violence. Without a Marshall Plan of sorts, the future is bleak for our country.

South Africa had no flu season – hand washing and mask wearing works.

We have a problem with data. It is a near certainty that the official figure of 17,248 Covid-19 deaths (as of 8 October 2020) is the tip of the iceberg. Our excess mortality rate (33,000 as of the beginning of August) suggests that closer to 50,000 people have died from Covid-19.

Going back to Level 5 lockdown in South Africa is not an option. The economic, social, personal, and mental

health costs are simply too high to bear. The country's economic output shrank by more than 50% in the second quarter of 2020. As a society, we will simply not survive another strict lockdown.

We have learnt that lockdowns in different parts of the world have different costs. Rich countries such as the UK, US and Germany can afford to pay the salaries and supplement the incomes of millions of their citizens. South Africa and other developing countries cannot afford such assistance. In thinking about our future, we need responses tailored to our context, our reality: responses that are fit for our purpose. We cannot blindly follow a one-size-fits-all approach and imagine that what worked in Tuscany or Stockholm will work here.

We are currently being told that perhaps as many as 40% of people in the Western Cape have been infected with the SARS-CoV-2 virus and that we will soon (or may already have) reached herd immunity. This is dangerous. Nobody knows what this "magical" number is. Herd immunity is a concept, not a number. There has never been a disease that's been eradicated through herd immunity. When somebody tries to reassure you that South Africa has reached herd immunity, enjoy the sentiment if it provides some light and hope for you in a dreadful year. But if you plan to use the argument for "herd immunity" as a justification for changes in your mask-wearing or physical distancing behaviours, you may be in for a painful shock. Speculation about herd immunity is deluded at worst and premature at best.

Covid-19 offers us profound lessons for the future if we are prepared to pay attention. It has shown us how to prepare for the next pandemic (it will happen), how we need to learn how-to live-in harmony with nature (burning forests is bad and wet markets are risky places), and perhaps most importantly, that what we are experiencing now is a mild dress rehearsal for the future horrors of climate breakdown.

There are no silver bullets. Even a vaccine that is 100% effective will not eradicate this virus in the short or even medium term. The polio vaccine was invented in 1955 but polio was only successfully eradicated from Africa in August 2020. Strong health systems, communities, behaviour change, and solidarity are going to be as important as any vaccine.

Now that we are in spring and moving into summer, the misinformation will start. We will be told that because summer is here, we will all be safer – or even that the virus is killed by the sun. Of course, as it gets warmer and we spend more time outdoors, there will be fewer opportunities for person-to-person spread. But it has nothing to do with the sun killing the virus – just ask California and Arizona.

We have not put children at the centre of our response. In fact, at times it has appeared that they have hardly even been a consideration. Cigarettes and alcohol received considerably more airtime than did South Africa's children. The short, as well as long-term welfare of our children, did not, for example, govern decisions to close or reopen schools for the most part. Decisions we make today will affect our children for the next half-century.

Evidence suggests that our "first wave" was particularly brutal and that if there is a second wave it is likely to be less severe.

In the early months of the lockdown, we learnt about the unfathomable depths of goodwill that still exist in our country. Soup kitchens sprang up and communities rallied. Community Action Networks and other initiatives worked tirelessly and were the key drivers of much of the behavioural change we saw. But we also learnt that people get compassion fatigue. When fatigue sets in, the government needs to act and take up the slack.

We learnt that the corrupt among us are utterly shameless and will stop at nothing. Of course, it was utterly naïve, if not delusional, to believe that a global pandemic and considerable numbers of people dying and losing their livelihoods would make an iota of difference to the agents of corruption. One could almost hear the gleeful rubbing of hands by the rancid vultures of corruption as President Ramaphosa announced the Solidarity Fund in late March.

We have a hunger pandemic in South Africa. The future of any country begins with its ability to ensure its citizens, and especially its children, have enough to eat. Children experiencing prolonged under-nutrition will become stunted, with profound implications for their functioning in school, and later in their capacity to become productive members of society. If we cannot do better in this regard, perhaps we should simply switch off the lights.

Between 2009 and 2019 South Africa created 2.4 million jobs, and in the past six months we lost somewhere between two and three million jobs. Poor people and women took the brunt of this. Inequality remains one of our stickiest problems.

We are seeing the increasing signs of complacency with less mask wearing and fewer indications of physical distancing. This does not bode well.

We forgot to feed our children.

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