**COVID-19 responses: Infrastructure inequality and privileged capacity to transform everyday life in South Africa.**

**Abstract**

Throughout the early months of 2020, COVID-19 rapidly changed how the world functioned, with the closure of borders, schools and workplaces, national lockdowns, and the rapid normalisation of ‘self-isolation’ and ‘social distancing’. However, while public health recommendations were broadly universal, human capacity to accordingly transform everyday life has differed significantly. We use the example of South Africa to highlight the privileged nature of the ability to transform one’s life in response to COVID-19, arguing that the virus both highlights and exacerbates existing inequalities in access to infrastructure. For those living in urban poverty in South Africa, where access to basic infrastructure is limited, and where overcrowding and high density are the norm, it is frequently impossible to transform daily life in the required ways. The failure of global public health recommendations to recognise these inequalities, and to adapt advice to national and local contexts, reveals significant limitations that extend beyond this specific global pandemic.

1. **Introduction**

This paper, written in the midst of the COVID-19 pandemic by two researchers situated in the global North and South, both with extensive fieldwork experience in urban South Africa, responds directly to the potential of the (at the time of writing, ongoing) COVID-19 pandemic to deepen existing inequalities. Using the example of South Africa, this paper draws attention to the ways in which COVID-19 highlights and exacerbates existing inequalities in access to infrastructure in the global South. This paper was initially written in April 2020 (with minor updates in July 2020), in the early stages of South Africa’s lockdown response to the global pandemic. In December 2019 a ‘pneumonia of unknown cause’, later named ‘severe acute respiratory syndrome coronavirus 2’, or SARS-SoV-2 (now colloquially known as coronavirus) was first reported to the WHO Country office in China. Over the following months, the virus spread rapidly around the world, causing large numbers of human fatalities, destabilising the world’s strongest and less strong economies, and severely restricting the movements of global populations through lockdown, social distancing and travel restrictions. While the origins of the virus are presently traced to China, this is inherently a *global* virus; not merely in terms of the epidemiological geographic spread, but equally in terms of the impacts across the world’s social, political and economic landscapes. However, as this paper demonstrates, those impacts are unevenly distributed, not just between countries with differing capacity to provide for example healthcare and socio-economic support packages, but also within countries, where pre-existing inequalities are accentuated by public health advice framed by Euro-Asian contexts.

Specifically, global approaches that are largely led by what is feasible in high-income countries with strong governments overlook the enormous differences in the global capacity of governments to respond, the physical and financial infrastructure that allows societies to respond, as well as inequalities in the ability of citizens to act in accordance with government responses and keep themselves ‘safe’ during the COVID-19 outbreak. The uneven impacts of COVID-19 and its potential to deepen existing inequalities is increasingly raised in the media. Amaral et al (2020)[[1]](#footnote-1) and Doré (2020)[[2]](#footnote-2) , for instance, warn against the unequal impacts of COVID-19 in Brazil, and Aguirre (2020)[[3]](#footnote-3) calls to change the neoliberal agenda to prevent the widespread impacts from the pandemic. Using the example of South Africa, this paper focuses specifically on the inequalities of access to infrastructure in South Africa and demonstrates way COVID 19 highlights and exacerbates such inequalities.

1. **A global virus in the global South: public health strategies and inequalities**

COVID 19 is a global virus, but the impact is uneven. The virus initially predominantly affected China and other parts of Asia, but soon spread to Europe and North America, with the highest concentrations per capita typically identified in large cities (Northern Italy’s rural outbreak notwithstanding). While leaders beyond Asia were initially slow to acknowledge the severity of the pandemic, by March 2020 the depth of the crisis was self-evident. The world’s high interdependence and flows of goods, services and people allowed the virus to spread rapidly, particularly within and between countries with significant interconnectedness. In part because many in the world’s poorest countries cannot participate in international travel, it took the virus much longer to get a foothold there (likely augmented by lack of testing to support data on infection). Because of the initial concentration of COVID-19 in Asia, Europe and the USA, global public health responses have been heavily informed by the societal structures and lifestyles of countries with higher incomes and tax bases (e.g. Europe, USA, Singapore) and more authoritarian regimes (e.g. China, South Korea).

Two broad non-pharmaceutical interventions have been implemented to reduce transmission by reducing contact rates in the general population: mitigation, and suppression. Both limit the spread of the disease, and bring different challenges, particularly in the global South. *Mitigation* sets out to slow, but not necessarily stop, the spread of the epidemic, e.g. through reducing peak healthcare demand while protecting people most at risk. This so-called ‘flattening the curve’ requires a long-term commitment of medical infrastructure (hospital beds, ICU beds, ventilators) and staff([[4]](#endnote-1)). Such mitigation policies as quarantine or home isolation of those with a high likelihood of carrying the virus, and social distancing of those most at risk, are designed to reduce strain on the healthcare system and thereby reduce deaths. Many countries have resorted to temporary lockdowns, including closing schools, cafés/restaurants and other non-essential businesses, and in many regions and countries (e.g. Hubei province in China, Italy, Spain, South Africa) there have been complete prohibitions on leaving home other than for buying groceries or medically-related outings. Many other countries restricted movement but allowed daily exercise outings with restrictions on size of group, time outside, and distance from home. Although mitigation reduces deaths by spreading infections over a longer period of time to ensure continued access to health care, many people still die from the disease as the peak is moved out rather than the disease being stopped.

The second strategy is *suppression*, aiming to reverse growth of the epidemic by reducing to a minimum the average number of secondary cases that each case generate, thus keeping total case numbers low([[5]](#endnote-2)). Examples of measures include social distancing (i.e. maintaining physical distance from non-household members), using bank cards instead of cash, avoiding crowds and practicing good hygiene. These measures, extensively promoted through social media, television, radio, public health campaigns and government briefings/speeches, are designed to reduce transmission of the disease. The core challenge is that the measures need to be maintained for as long as the virus is active in the population, or until a vaccine is available[[6]](#footnote-4). This is problematic because, as Enserinck and Kupferschmidt point out, ‘*long lockdowns to slow a disease have catastrophic economic impacts and may devastate public health themselves*’. A balance needs to be found between “*protecting health, protecting the economy, as well as protecting people’s wellbeing and emotional health’*(*[[7]](#endnote-3)*). Crucially, the epidemic modelling done to predict health outcomes does not capture the social and economic implications, which are particularly acute in global South contexts where governments lack capacity to finance safety nets for the poor.

In addition the mitigation and suppression strategies, public health interventions and media narratives related to COVID-19 have centred on the higher risk of fatalities amongst the elderly or people with co-morbidities, including the immunocompromised. Significant attention is given in high-income countries to protecting this relatively small part of the population from exposure to the virus, in particular through measures of social distancing and increased hygiene. While following these guidelines, in particular those of social distancing and lockdown, have been challenging in high-income countries, the challenges for those living in the global South are more significant.

In many global South countries, large (sometimes majority) parts of the population are vulnerable in these health terms, and their governments have less capacity to implement such targeted measures. Tuberculosis (TB), which is likely to leave people at greater risk of contracting COVID 19, illustrates this vulnerability. It is the world’s leading infectious disease killer, affecting nearly 10 million people worldwide, and it caused 1.5 million deaths in 2018.[[8]](#footnote-5) (COVID-19, by contrast, affected 1.4 million people in its first four months and there were 79 385 deaths as of April 9th 2020.[[9]](#footnote-6)) Given TB’s scale, it is therefore unsurprising that the WHO and other public health organisations have targeted those infected as potentially vulnerable and needing protection from COVID-19[[10]](#footnote-7).

In South Africa, a large part of the population is immunocompromised and therefore very vulnerable. An estimated 7.35 million people (approximately 13% of the population) suffered from Human Immunodeficiency Virus (HIV) in 2018, and an estimated 89,000 people died from HIV in 2017.[[11]](#footnote-8) Similarly, according to the 2019 WHO Global TB Report,[[12]](#footnote-9) around 322 000 people (just under 1% of the population) fell ill with active TB in 2017 (the majority of infected were living in low-income communities), and roughly 78 000 people died from TB in 2017. Of these, 56 000 were HIV positive.

The South African population, with its high incidence of TB and HIV, could therefore be expected to be extremely vulnerable to a large-scale COVID-19 outbreak, and studies have suggested that those living with HIV and TB in the country have an increased death risk from COVID-19([[13]](#endnote-4)). Although the reported effect seems relatively small, there remains a severe lack of data on how HIV and TB may interact with COVID-19. Furthermore, public health officials recognise that data based on global North contexts are not necessarily relevant in South Africa because, according to Nording, ‘*the South African population may differ in several ways from the Italian patients, including underlying medical problems, socioeconomic status, and access to health care’[[14]](#footnote-10).* Consequently, while we know that immunocompromised people are at greater risk of COVID19-complications, and that such people represent a higher proportion of populations in the global South than the North, the implications of this knowledge for how COVID19 may play out in practice in South Africa remain uncertain.

Furthermore, despite widespread recognition that specific health/age demographic groups are more vulnerable to fatality from COVID-19, there is significantly less recognition that inequalities in access to infrastructure and resources can also affect a population’s exposure to COVID-19 or its ability to respond, and may exacerbate existing vulnerabilities and/or create new ones. Indeed, public health officials recognise, according to Corburn and colleagues, that *“the most vulnerable groups [are] particularly those living in informal habitats and depending on informal livelihoods in the global south”([[15]](#endnote-5))*. It is these challenges and the ways in which they deepen existing inequalities that are the primary focus of the paper, which concentrates on South Africa as a global South case study.

1. **COVID-19 responses and the privilege of being able to comply in South Africa**

**3.1 South Africa’s virus and the government response**

Once the coronavirus was detected in South Africa, the government responded rapidly to the threat, promptly employing public health strategies seen elsewhere, and especially adopting a mitigation perspective, in an attempt to limit spread and ‘flatten the curve’. Following the first confirmed case on 5th March 2020 in a patient recently returned from Italy, on 15th March (when 51 people were infected but no deaths were reported) President Cyril Ramaphosa announced a national state of disaster and set in place school closures, travel bans and restrictions on public gatherings. One week later, the President announced a complete lockdown for 21 days, starting on 26th March, when there were 927 confirmed cases and no deaths had been reported. This was later extended by two weeks to 30 April (i.e. five week lockdown in total). During lockdown, people were allowed outside only for essential activities (groceries and medical outings), enforced by the military and police.

At the end of this lockdown the government introduced the COVID-19 alert system to manage its gradual easing and move from a strong mitigation perspective towards suppression (Table 1). The alert system has five levels and is based on a risk-adjusted approach and guided by several criteria including: (i) capacity of health facilities to accommodate severely sick people; (ii) the level of infections and the rate of transmissions; and, as the government explained it , (iii) the *‘extent of public health interventions and the economic and social impact of continued restrictions’.[[16]](#footnote-11)*

Table with summary of alert levels (adapted from SA Gov at sacoronavirus.co.za):

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Alert level**  | **Level 5** | **Level 4** | **Level 3** | **Level 2** | **Level 1** |
| **Objective** | Drastic measuresto contain the spread of the virus and save lives. | Extreme precautionsto limit communitytransmission andoutbreaks, whileallowing some activity to resume. | Restrictions on many activities, including at workplaces andsocially, to addressa high risk oftransmission. | Physical distancingand restrictions onleisure and socialactivities to preventa resurgence of thevirus. | Most normal activity can resume, with precautions and guidelines followed at all times. Population prepared for an increase in alertlevels if necessary. |
| **Sectors permitted** | Only essential servicesas per existingregulations. | All essential services, plus a limited numberof sectors with a low transmission rate and high economic or social value. | A wider range ofsectors permitted with a low to moderate risk of transmission that can be effectivelymitigated. | Most sectors permitted,with limitationsremaining wherethe risk oftransmission is high. | All sectors permitted. |
| **Retail permitted** | Only essential goods,including food, medicalproducts, cleaningand hygiene products,fuel, and winter goodssuch as blankets andheaters. | All essential goods,as well books, stationery and office equipment.Alcohol may be soldwithin restrictedhours, and in limited quantities, for off-site consumption.Restaurants and fast food outlets may open for delivery only. | All levels 5 and 4 retail permitted,as well as clothingstores and hardwarestores. | All retail permitted.Restaurants andfast food outlets mayopen for delivery andtake-away. | All retail permitted.Restaurants mayopen, with stringentsocial distancingmeasures. |
| **Movement** | All but essential workers must stay at home. Othersmay leave home onlyto purchase essentialgoods or seek medicalcare.No inter-provincialmovement ofpeople, except fortransportation ofgoods and exceptionalcircumstances(e.g. funerals). | All must stay at home except for work, necessary shopping, or seeking medical care. No inter-provincialmovement of people, except to return to usual place of residence, for transportation of goods and exceptionalcircumstances (e.g.funerals). Curfew in place between 7pm and 5am. Outdoor exercise permitted | All are encouraged tostay home as faras possible, and limitinteractions withothers.No inter-provincialmovement ofpeople, except toreturn to usual placeof residence, fortransportation ofgoods and exceptionalcircumstances(e.g. funerals). | All are encouraged tostay at home as faras possible, and limit interactions withothers.Movement permiited betweenprovinces at levels 1and 2, but may be restricted betweenprovinces at a higherlevel and those with alower level  | All may leave home,taking precautionswhile interacting with others.Interprovincialmovement allowed. Restrictions oninternational travel.Curfew lifted. |
| **Gatherings** | All public gatheringsare prohibited. | All public gatheringsare prohibited. | All public gatheringsare prohibited. | All public gatheringsare prohibited. | All public gatheringsare prohibited. |
| **Transport** | Bus services, taxiservices, e-hailingand private motorvehicles may operate at restricted times, with limitationson vehicle capacityand stringent hygiene requirements. | Passenger rail, busservices, taxi services,e-hailing and privatemotor vehicles mayoperate subject todirections. | Limited domestic airtravel, with a restrictionon the number offlights per day andauthorisation based onthe reason for travel. | Limited domestic airtravel, with a restrictionon the number offlights per day andauthorisation based onthe reason for travel. | Domestic air travelrestored. |

After five weeks of full lockdown on level 5, largely focused on ‘flattening the curve’ as part of South Africa’s mitigation measures, the lockdown was eased to level 4. At this point, the pandemic response slowly moved towards a combination of mitigation and suppression. This level, implemented between 1-31 May, allowed some key economic sectors to operate (e.g. agriculture and public works civil engineering projects).

At the time of writing, the country is in alert level 3, which was implemented on 1 June 2020. As of 25th of July there were 434.000 confirmed cases and 6655 deaths[[17]](#footnote-12). As there are a range of hotspots (areas with more than 5 infected people per 100,000, or where new infections are rapidly increasing), the government announced that a differentiated approach would be taken for specific areas, particularly in urban areas.

The initial lockdown in March 2020 received wide public support as a necessary strategy to prevent the spread of COVID-19 and allow the state to prepare for the roll-out of other plans. However, the severe impacts of lockdown on the poor in South Africa (where risk of starvation may be greater than the risk of dying from COVID-19), raises doubt about the appropriateness of the full lockdown (the mitigation strategy) for the South African context. Arguably, the suitability of the extreme lockdown is dependent on the specific measures that accompanied it, explored later in this paper; specifically, the inability of the urban poor to comply with hand washing requirements, the irrelevance of remaining ‘indoors’ for those without formal shelter, the impossibility of social distancing in overcrowded high-density settlements, and the impacts of overlooking the informal sector.

In addition to the alert levels, President Ramaphosa announced a socio-economic response plan on 22 April 2020, to support the functioning of the economy under lockdown. The country’s response was to be based on four main interventions, including: (i) a large increase in health budget to respond to the virus; (ii) relief of hunger and social distress; (iii) support for companies and employees; (iv) a phased re-opening of the economy. A corresponding economic stimulus package, valued at R500-billion, was announced to (re)direct resources to fight the pandemic. Key measures of relevance for this paper included:

* R500 increment in the child support grant per primary caregiver for the next six months.
* R350 unemployment grant.
* R200-billion loan guarantee scheme in partnership with major banks, the National Treasury and the South African Reserve Bank.

There have been mixed responses to the plan, including criticisms that it will, according to Ramantsima, be ‘exploiting the poor, deepening poverty levels and the shrinking middle-class poor’[[18]](#footnote-13), as well as increasing inequalities between South Africans and foreign nationals, who often struggle to qualify for state support[[19]](#footnote-14).

Within the context of the state’s response to COVID-19, the capacity of individuals to comply with government regulations is highly differentiated and reveals significant inequalities that pre-date the pandemic. In the next few sections, we will highlight these inequalities and how they impact (and are impacted by) COVID-19.

**3.2 The privilege of ‘choosing’ to follow public health recommendations**

Globally, three specific public health recommendations have been introduced in response to COVID-19: hand-washing, social distancing, and lockdown. All require citizens to change their behaviour. While the specifics of implementation and extent of state regulation differ between countries, these three interventions are globally recognized. We explore the assumptions inherent in each of these recommendations, for example regarding access to clean water, the practicality of infrequent shopping, and the physical space required to distance from others and remain indoors. These assumption are hardly surprising given that WHO recommendations initially emerged to tackle the virus in countries/cities with well-developed physical and financial infrastructure networks. However, using the example of the daily lives of the urban poor in South Africa, we explore how these public health recommendations assume a privileged capacity to comply, effectively ignoring the prospect that compliance, far from being a matter of choice, is impossible for some. Indeed, when the South African President announced national lockdown on 24th March, he stated that “the most effective way to prevent infection is through basic changes in individual behaviour and hygiene”.[[20]](#footnote-15) This statement assumes universal capacity to change behaviour, and overlooks the vast inequalities in infrastructure access in South Africa’s cities. In this paper, we demonstrate the ways the pandemic highlights and exacerbates these existing inequalities, as well as how government advice fails to acknowledge the privilege of being able to choose to change one’s behaviour. The hardest-hit areas (in terms of highest concentrations of COVID-19 infections) are in low-income, densely populated townships, where people cannot withdraw from social interactions in a single home, work remotely, buy large quantities of supplies to avoid regular visits to the shops or drive alone in a car to secure supplies.

While we recognise that the South African government is largely following international ‘best practice’ in an extremely challenging context, we argue that public health advice tailored to local contexts is urgently required. In this paper we reveal how a short-term pandemic highlights the long-term inequalities of access to infrastructure in South Africa.

***Hand-Washing***

On 9th March, just days after the first confirmed case of coronavirus in South Africa, Health Minister Zweli Mkhize used a press briefing[[21]](#footnote-16) to urge South Africans to regularly wash their hands to limit spread of the virus. Two weeks later, the President, in his national lockdown speech, urged citizens to “wash hands frequently with hand sanitisers or soap and water for at least 20 seconds”. These recommendations are in line with WHO guidelines, as well as the public health advice issued in many other countries at that time. However, this blanket statement on hand-washing belies the realities of water access in South Africa. While official statistics indicate almost universal (98%) piped water access for urban households, in practice this ‘access’ is seriously undermined by service interruptions and affordability.([[22]](#endnote-6))

As part of South Africa’s constitutional right to water, the Free Basic Water (FBW) policy mandates that municipalities provide low-income ‘indigent’ households[[23]](#footnote-17) with a small amount of free piped water within 200m of their home.([[24]](#endnote-7)) With over one-fifth of South Africa’s population (22%) registered as indigent,[[25]](#footnote-18) this represents a significant number of households. In the City of Cape Town, households that register as ‘indigent’ (itself a complex and paperwork-heavy process that excludes many low-income households ([[26]](#endnote-8))) receive 350 litres of free water per day, managed via a compulsory Water Demand Management Device (WMD).([[27]](#endnote-9)) Since Cape Town’s 2015-2018 drought, WMDs have been widely installed as a state tool to monitor consumption (high consumers are threatened with installation for monitoring-purposes), but they remain compulsory only for those registered indigent. Since 2007, approximately 250,000 WMDs have been installed in the City of Cape Town, the vast majority most likely in low-income households, meaning that around one-fifth of the City’s households have their daily water capped at 350 litres.([[28]](#endnote-10)) For these households the WMD operates as a tool that both delivers and limits water supply, automatically cutting off water supply when the daily ration is reached, and re-opening the valve at 5am the next morning.

In many low-income formally-planned housing settlements (as distinct from slums/informal settlements), multiple households occupy a single plot. In some cases there are multiple backyard dwellings, each housing a separate household; in other cases multiple households share a single property; and in yet other cases, the single ‘household’ is large and multi-generational, extending well beyond the assumed nuclear composition of ‘parents plus children’. The 350 litres of free water is delivered to the plot, rather than the household per se. That single plots accommodate large and multiple households is the norm rather than the exception in South Africa’s low-income urban settlements.([[29]](#endnote-11)) Consequently, 350 litres of daily water is grossly insufficient to meet the water needs of most plots. Even in ordinary circumstances indigent households are acutely aware of their daily water consumption. Indeed, it is standard to view households queuing at 5am to fill buckets/bottles from the plot’s external standpipe before the valve closes at 5:30 am. Supplies are then rationed between households and stored for consumption and use throughout the day. The challenges are described by a backyard tenant:

*Every morning you’ve got to stand up early so that you could fill up your water bottles/buckets because you only get a certain amount of water per day. Even though the landlord charges R200[[30]](#footnote-19) per month for the water. It’s hard on us because I’m only allowed to fill four 3 litre bottles for the day – which is 12 litres – we’ve got to wash, do dishes and do washing, with 12 litres it’s extremely hard … Every night after we are done bathing, I use our bath water to wash our clothes.* Single parent household with two children aged 3 years and 2 years, 11th February 2019[[31]](#footnote-20)

The government message to wash hands regularly must be considered within this pre-existing context. While appropriate from a public health perspective, it overlooks the realities of limited and precarious access to water for the vast majority of low-income urban households, highly dependent on access awarded by those in control of water taps. In effect, the government’s advice on handwashing fails to acknowledge the differentiated access to clean water throughout South Africa’s cities. It also places the burden of compliance on households, without a concomitant commitment by the state to provide sufficient water. While the state responded by delivering communal water tanks in informal settlements (announced in the *Cape Times* newspaper early-April, ~10 days after lockdown started),[[32]](#footnote-21) this ‘sticking plaster’ solution fails to acknowledge the depth of water precarity within *and beyond* informal settlements. Notwithstanding the problematic provision of a resource that encourages communities to congregate rather than distance, it fundamentally overlooks the massive under-investment in service infrastructure, and inability of households to access services in both informal and formal low-income settlements. While coronavirus is a temporary pandemic, lack of access to water (and other services) is a permanent feature of life for many South Africans.

This example of water access highlights how pre-existing inequalities in accessing basic infrastructure can be exacerbated by the virus, and how the capacity to respond to public health advice is highly differentiated and often privileged. Crucially it demonstrates the need to provide local contextualisation for global public health advice. Furthermore, as the virus spreads throughout areas with poor infrastructure, there is a risk that those unable to adhere to public health recommendations will be demonised for their inability to ‘choose’ to prioritise hand-washing over other water-based needs.

***Social distancing and social grants***

The WHO advice on social distancing to limit spread of the coronavirus has been applied in South Africa, initially through indirect measures, such as the ban on gatherings of more than 100 people as part of the pre-lockdown, and subsequently through a suite of more direct requirements such as full lock-down, curfews, and mandatory wearing of masks outside the house. For example, the President’s national lockdown speech demanded that “everyone must do everything within their means to avoid contact with other people”. There soon followed news reports that soldiers were using violence (including rubber bullets and whips) to enforce social distancing amongst low-income urban dwellers standing in proximity whilst queuing for food supplies.[[33]](#footnote-22) As with hand-washing, the public health advice to remain socially distant from other humans is an ideal, not tailored to the practical living conditions of most urban South Africans.

The example of social grants is also relevant here. According to Stats SA, over 17 million South Africans, one in five, rely on social welfare grants from the state,[[34]](#footnote-23) a figure that is expected to grow after the COVID-19 outbreak. Social grants, which are generally collected in person due to low levels of banking amongst the poor, are usually paid at the beginning of the month, but were moved forward two days because of the lockdown.[[35]](#footnote-24) Consequently, social grant beneficiaries flocked to post-offices, ATMs and retail stores on 30th and 31st March 2020 when the elderly and disability grants were paid out, and on the 1st of April for other social grants, not only having to break social distancing rules, but also to disproportionally expose themselves to the virus by standing in slow-moving queues for hours. While in some areas social distancing was observed, in areas with high building density and limited open space, people could only stand in tightly packed queues waiting for their turn. Grant recipients, primarily those with increased vulnerability to COVID-19 fatality (i.e. the elderly, the disabled), also had to compete with others in stocking up on groceries during the lockdown. The impossibility of maintaining social distancing in these situations again highlights the impractical nature of the government’s initial advice, which failed to consider the specificities of the South African context.

**3.3 The practicalities of a lockdown for low-income households**

On 24th March 2020, the President in his national speech called for a strict lockdown. Similar to the social distancing procedures, the practicalities of the five week lockdown demonstrate the highly unequal ability of South Africans to comply. In this section, we describe the realities of overcrowded and high density housing, and food insecurity.

***Overcrowding and high density housing***

Due to the legacies of the apartheid system’s unequal access to the built environment, there is significant demographic and spatialised disparity in both the density and occupancy rates of housing structures in South Africa’s cities. In Cape Town for example, centrally-located low-density suburbs where large houses with spacious gardens accommodate middle-class nuclear families contrast with overcrowded high-density settlements on the city periphery, where often multi-generational households reside in cramped houses and shacks, cheek-by-jowl with other similarly-high occupancy housing structures.([[36]](#endnote-12)) In this context, the ability of household members to remain indoors and to socially distance from neighbours is highly uneven. Indeed, approximately half of South Africa’s population live in low-income housing, whether in informal settlements (13.1% of South African households),[[37]](#footnote-25) state-subsidised housing settlements (13.6%)[[38]](#footnote-26) or townships (24.4%).[[39]](#footnote-27) In all these settlements, a significant proportion of households live in (backyard) shacks, colloquially named ‘bungalows’ or ‘hokkies’, that share perimeter ‘walls’ and built from brick, zinc, and corrugated iron. Not only are neighbouring structures too close to satisfy social distancing requirements, but residents risk exposure to inhumane temperatures if they remain indoors (as non-brick materials magnify outdoor temperatures). Some of these pre-existing housing problems were highlighted by homeowners in a state-subsidised settlement in Cape Town (all quotes from March 2016).

*Here in the house is me, my wife, my daughter and son – we all stay in a one bed room. And outside I have three bungalows. I sleep in bedroom and my kids sleep in kitchen. It’s very crowded.*

*My sister and husband died, so their 2 kids live here now. I had to make space for them. My son lives in the bungalow and the other two live with other people because these houses are too small ... They didn’t measure the boundaries so the bungalows are on each other’s yards.*

*This house is 27sq m. Living here it is four adults (me, my husband, granny, my daughter); and three children (my kids). Someone is sleeping in front (lounge) because it’s not enough [space in the house]*.

*We had a fire at our house – in the house there were 3 adults (grandma, son, daughter-in-law) and 5 children. Then there were also 4 bungalows also destroyed by the fire; in those there were: a) 2 adults and 1 child; b) a couple and 3 children; c) a lady and 1 child; and d) a couple and 2 children. The fire spread so quick because we all live on top of each other.*

As these quotations demonstrate, it is common to have up to eight people living in a one-bedroom house, and multiple additional/extended households living in close proximity in the yard. Meanwhile, UN-HABITAT defines overcrowding as anything over three people per habitable room[[40]](#footnote-28) . Remaining indoors for five weeks and maintaining social distance from other households is impossible in these conditions, and the blanket government advice demonstrates a lack of official recognition of the realities of everyday life for those living in urban poverty in South Africa.

We do not contest the benefits of strict social distancing measures in curbing the pandemic, and the history of COVID-19 infections in the South Africa has shown that in the initial stages of the pandemic, the spread was successfully limited. As Lippi et al (2020) indicate ‘*In fact, such measures may be said to be a ‘necessary evil’ in tackling the COVID-19 pandemic’* (p89)[[41]](#endnote-13). What we question is the overly simplistic nature of the global health advice in its blanket recommendation of a lockdown. In fact, the WHO is very clear about the health risks of overcrowding and states that: “*For communities, inadequate shelter and overcrowding are major factors in the transmission of diseases with epidemic potential such as acute respiratory infections, meningitis, typhus, cholera, scabies, etc. Outbreaks of disease are more frequent and more severe when the population density is high”.* [[42]](#footnote-29) Similarly, other overcrowded areas such as transportation, health facilities, shopping facilities, places where social grants can be collected and basic services can be accessed (e.g. ablution blocks and standpipes) represent a concentration of germs.[[43]](#footnote-30) The decision as to when and how such measures may be lifted requires a nuanced and well-balanced consideration of not only their benefits in helping to reduce the spread of COVID-19 and their negative effect on the economy, but also their impact on individuals’ wellbeing.

***Food security and purchasing of essential goods during lockdown***

In the early days of the lockdown, food security was severely threatened by the prohibition of informal food vending. In South Africa, the informal food sector is essential for the food security of the urban poor, and even its temporary lockdown has had negative implications for the health and nutrition outcomes of already-vulnerable households. Only after significant push back from a range of stakeholders, was the informal food vending system allowed to operate again under strict regulation and only the small minority of vendors that had a permit.[[44]](#footnote-31) On 6th April, the Government Gazette stipulated that all vendors of uncooked food items could operate, albeit subject to increased safety regulations and pending temporary permits. While the government’s rapid U-turn on allowing some informal food vendors to operate demonstrates some recognition of the realities of urban poverty, the original lack of knowledge on the food purchasing patterns in low-income communities is itself of grave concern, further demonstrating the problematic application of ‘global’ health standards without local adaptation. However, what the example below demonstrates is the need to responding to local needs to learn and adjust responses accordingly.

Many people living in South Africa’s urban areas are food insecure. In the run up to the lockdown, while the country’s wealthier citizens stockpiled food and other essentials to avoid having to leave the house regularly during the lockdown period, those with low/irregular incomes, no financial reserves and/or a reliance on social grants were unable to buy sufficient additional supplies. Previous research has identified high levels of food insecurity in Cape Town; for example, Battersby([[45]](#endnote-14)) found that 80% of the sampled households in a baseline survey of Cape Town could be classified as moderately or severely food insecure. Crucially, in urban areas the main driver of food insecurity is not availability, but the capacity of households to access food shops, which is directly related to income both for groceries and travel costs. In urban South Africa, low-income households typically rely on roadside informal traders and small-scale spaza shops that are spatially dispersed throughout settlements for daily shopping, with larger trips to more distant supermarkets undertaken only weekly or monthly.([[46]](#endnote-15)) While lockdown regulations do not prohibit daily shopping, in the initial stages the informal food sector (roadside sellers, small-scale and spaza shops) was locked down, while the formal venues, such as supermarkets, registered spaza shops and food delivery companies, were allowed to stay open. For wealthier households, typically reliant on chain supermarkets, this was ‘business as usual’. For low-income households this was a hugely problematic aspect of the lockdown, particularly as it coincided with the cash-lean end of the month or week, the so-called “hungry season”.[[47]](#footnote-32) While supermarkets have successfully penetrated many low-income communities, they are often incompatible with the consumption and food security strategies of the poorest households (e.g. their lack of electricity to refrigerate bulk items), and they typically require low-income households to walk long distances and/or pay for transport, both problematic in the context of lockdown.([[48]](#endnote-16))

Informal sector markets are clearly essential to enable the compliance of low-income households with a lockdown. [[49]](#footnote-33) Their initial closure indicated a fundamental lack of understanding of the daily lives of the urban poor, again revealing the reliance of the South African government on global public health advice that at the time was not tailored to the local context. Even in the brief period when informal food markets were prohibited, concerning trends were observed, such as the exclusion of fruit, vegetables, dairy and meat from purchases in poor communities[[50]](#footnote-34) for two reasons: (i) the ability to reach only one shop, rather than visiting multiple shops and markets to make the most of a limited budget; (ii) the need to focus on calorie-providing carbohydrates in times of hardship.[[51]](#footnote-35) The shutdown directly threatened the food security and dietary needs of many South Africans, but also resulted in enormous loss of livelihoods among those working in the informal food sector (such as fruit and vegetable vendors).

Although actively responsive to the needs of the formal sector and those depending on social grants (e.g. by making grant collection simpler, expanding social grant coverage and relief packages for those in the formal sector that are affected by COVID-19), the South African government did not initially cater for the informal sectors of the economy, and to some degree this is ongoing. This has been an enormous shortcoming in South Africa’s COVID-19 response, with consequences that likely deepen inequality in South Africa, including along dimensions of gender, income, intergenerational and racial inequality. Around 2.5 million people, and around 30% of the labour force, operate in the informal economy in South Africa in every corner of the labour market and beyond[[52]](#footnote-36). These include about one million domestic workers (mostly women), and a range of essential and less essential workers including care-workers (mostly women), farm workers (around 650,000, most of them women), waste recyclers, transport workers, hair-dressers and barbers, street and market traders and home-based production workers. Some are self-employed, others are informally employed. Required to remain at home; they are without incomes and there are few options for support from the government[[53]](#footnote-37). For example, where the government arranged support for formal businesses in the form of payment holidays, with Unemployment Insurance Fund (UIF) funding for the unemployed, no provisions were made for those in the informal sector. As a result, poor households with limited or no income were most affected by the lockdown[[54]](#footnote-38). Many community action networks and soup kitchens were set up by local residents to support those in need through the provision of meals[[55]](#footnote-39).

For urban informal enterprises, the consequences are likely to be severe[[56]](#footnote-40). Informal spaza shops could potentially have applied for a license to remain open but most lacked the means to apply because of a lack of capacity or ability to demonstrate eligibility for support. Yet in a context where mobility is limited, local shops are more essential than ever before. More generally these businesses and their employees are now – for the most part – unable to operate. Appropriate support needs to engage with the reality of informality. The Spaza Relief fund, for example, comes with strict formalisation requirements. It is a cruel paradox for informal entrepreneurs to have to formally apply for formal support for informal activities[[57]](#footnote-41). Now is the time for government departments to engage with informal traders’ associations to co-design new approaches for this sector. Covid-19 is an opportunity in this respect, demonstrating the imperative for informal provision to be recognised rather than viewed as a nuisance.

1. **Conclusion**

This paper responds directly to the potential of the (at the time of writing, ongoing) COVID-19 pandemic to deepen existing inequalities. We focus on the differentiated societal capacity to transform everyday life in response to COVID-19, using the example of South Africa to highlight some of the specific ways in which being able to transform is a privileged ability.

Although to date no direct links have been established between inability to follow global public health recommendations and COVID infection/mortality levels, in South Africa there has been a shift where initially the virus spread in wealthier neighbourhoods (as a direct consequence of European travel), but over time began to have a larger impact in low-income communities.This highlights the fault lines in access and care for those on margins, and we have shown how some of South Africa’s COVID-19 responses could exacerbate existing inequalities. Specifically, we have shown that cramped living conditions and a lack of access to basic infrastructure that provides water and food hinder the ability of the often already vulnerable urban poor to transform their everyday lives and make behavioural changes in response to public health advice. This is particularly visible in relation to indigent households’ capacity to adapt to even to the most basic and essential hygiene requirement of increased hand washing. For households already functioning with extremely limited water, in which daily rations are eked out and re-used, any decision to increase water use for hand-washing has a direct impact on what is available for drinking, cooking, laundry and washing. Whichever of these uses households prioritize, the outcome is increased vulnerability to the virus and other health impacts. Similarly, high density settlements and overcrowded housing severely hinder urban dwellers’ capacity to practice social distancing and remain indoors. The increased risk brought by the proximity of neighbours is compounded by the need to collect social grants alongside thousands of other South Africans, and to frequently visit local shops to purchase daily essentials. The government lockdown rules (including the initial closure of informal food markets) had an immediate impact on poor peoples’ diets, with longer term implications, thereby further reducing peoples’ physical resilience to the virus. Furthermore, disaster response plans focused on protecting the economy have often failed to acknowledge the informal sector, which causes further harm to the poor given the reliance on the informal sector.

Two core arguments are put forward by this paper. First is the way state responses to COVID-19 have not only highlighted existing inequalities, for example regarding access to basic infrastructure, but also exacerbated these inequalities, for example in distorting access to food (closure of informal markets resulting in reduced diet quality) and water (increased demand on unchanged water rations). As the paper demonstrates, for those living in urban poverty in South Africa, where access to basic infrastructure (e.g. water, food) is limited, and where overcrowding and high density are the norm, it is frequently not possible to transform daily life in the ways required and expected by the state.

This points to the second core argument of this paper; that public health recommendations devised at the global scale, led by the experiences and capabilities of countries with for example robust tax bases, universal access to infrastructure and strong government, require contextualisation. When the COVID-19 pandemic started, governments such as South Africa’s were following international ‘best practice’ and WHO advice. Although in principle, this is excellent advice, in practice there are significant problems with compliance for many in South Africa. While each country implements public health measures with differing intensity (e.g. severity of lockdown), there has been a lack of specific attention to both the needs of those most vulnerable (beyond health determinants such as age, pre-existing disease) in terms of their capacity to adhere to public health advice, as well as the capacity of different countries to support their populations in adhering to these core transformations necessary for survival. The examples presented throughout this paper indicate that broad public health advice needs to be adapted to the specific empirical context of each country, and that reproductions of Euro-American/East Asian narratives are not just inadequate, they are actively harmful.

While it is easy to criticise rapid response public policy for overlooking the needs of low-income populations, it is much harder to recommend alternatives. Clearly, it is essential that more realistic advice be prepared, tested and provided both for COVID-19 and future pandemics, with strategies that are feasible for those living in cramped housing conditions where access to water and other basic infrastructure is limited. Specific tailored practical supports (e.g. termination of water caps, fresh food subsidies, support for the informal sector) are urgent. It is vital that more participative processes ensure that policies intended to support populations do not unwittingly exacerbate marginalisation. There is an opportunity here to draw on disaster planning and management expertise. Furthermore, there is an urgent need for global financial support to those countries (likely to be concentrated in sub-Saharan Africa) where the economic impacts of COVID-19 are aggravating the health impacts.

In concluding this paper, we stress two factors that are most concerning about the (highly predictable) ways a global pandemic exacerbates existing infrastructure inequalities. First, that public health recommendations have failed to be based on a recognition of these inequalities, and to adapt advice accordingly; and second, that even in a crisis of this magnitude, the needs of the urban poor that extend well beyond this specific global pandemic, remain largely overlooked. For while COVID-19 is temporary, unequal access to infrastructure is a permanent feature of urban life for many. The uncertain resolution of this pandemic, not to mention the inevitability of future pandemics, presents an additional compelling reason for addressing this inequality.

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