



Covid-19 and SADC countries: Enhanced Social Distancing is the only option.

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Background

The world-wide crisis caused by Covid-19 seems entirely without precedent in the modern age. The spread of COVID-19 is accelerating. In Africa, most countries have now confirmed cases and the number of fatalities is rising. If allowed to spread unmanaged, the impact on African citizens and economies will be substantial. The number of cases in Africa still remains low compared to other regions. Available data, attributes this to both the average age of African citizens, which is the lowest globally, and factors relating to the continent's climate, although this has been recently challenged by some experts¹. However, Africa may yet be worst hit by this invisible disease. It is well-known that Africa has fragile health systems, which, coupled with a high burden of respiratory and diabetic diseases and densely packed urban agglomerations, are likely to increase the vulnerability of the continent and the lethality of the virus². According to Dr Tedros Adhanom Ghebreyesus of the World Health Organization (WHO), Africa should "wake up" to the COVID-19 threat and prepare for a worst-case scenario³.

Since virtually every country in the world has identified at least one case, it is obvious why the World Health Organisation (WHO) declared this a global pandemic. The effects, health, economic, social and political, are slowly being understood, but, according to most authorities, are likely to be much worse in some regions of the world. Most authorities argue that the effects will be worst in the poor, underdeveloped of the world, and Africa in particular. Thus, the speed with which countries can detect, report, and respond to outbreaks is a reflection of their wider institutional capacity. Epidemics are a reality test for public governance and leadership, not only at country level, but also at regional and continental levels, as well as in connection with the wider network of multilateral actors and partners⁴.

Africa is a home to over a billion people. Its' public public health systems are likely to be overwhelmed if the virus takes hold. According to the WHO, Covid-19 cases have been confirmed in 46 African countries, with a total of 7 720 cases. At the time of this report, 1000 deaths have been recorded across the continent⁵. Some countries account for a large proportion of the confirmed cases: Algeria (1,825) and South Africa (2,208) are 53% of all African countries, but these are probably countries in which many cases came from visitors or returnees from other affected countries. However, detection varies according to the capacity of countries, and many African countries have porous borders and weak monitoring systems which allow the symptomatic and asymptomatic citizens to slip through. However, on the regional scale, Southern Africa Development Community (SADC) countries account for 39% of all African cases, but this is largely due to the very number of cases in South Africa, 71% of all SADC cases.

¹ Mo Ibrahim Foundation, (2020). *Covid-19 In Africa: A Call For Coordinated Governance, Improved Health Structures And Better Data: Data And Analysis From The Mo Ibrahim Foundation*, Mo Ibrahim Foundation

² Ibid.p.6

³ BBC News, 3 April, 2020

⁴ Mo Ibrahim Foundation, 2020,p.6

⁵ BBC News, 19 April, 2020

Table 1: Covid-19 cases in SADC countries
 [Source: WHO, Situation Report 83. 12 April 2020]

| Country | Confirmed Cases |
|------------------------------|-----------------|
| Angola | 19 |
| Comoros | 0 |
| Botswana | 13 |
| Democratic Republic of Congo | 223 |
| Eswatini | 12 |
| Lesotho | 0 |
| Madagascar | 104 |
| Malawi | 12 |
| Mauritius | 319 |
| Mozambique | 20 |
| Namibia | 16 |
| Seychelles | 11 |
| South Africa | 2028 |
| Tanzania | 32 |
| Zambia | 40 |
| Zimbabwe | 13 |

The big question in the minds of everyone is how bad can it get? The truthful answer must be that no-one really knows: there are so many factors that govern the way the epidemic will play out in any given country. Much of the information must be assessed according to the circumstances of any country. For example, it is evident that older people are at greater risk, so it is the case that countries with a youth bulge, like Zimbabwe (and most countries in Africa), may get high rates of infection, but relatively fewer deaths due to the young population. Zimbabwe has fewer elderly than many Western countries, but very large proportion of the elderly live with their families and therefore cannot easily be isolated as might be the case in developed, wealthy countries. Thus, some of the dividend of a young population and fewer older people may be lost because older people are more likely to be exposed in poor countries.

Linked to this issue, and the possible advantages of having a youthful population, much of the information on the epidemic comes from higher income countries where the burdens of disease, poor nutrition, and poor living conditions have not applied. These factors are common in the majority of African countries, and affect the majority of the people living in African countries: 1 in 3 Africans, 422 million, live below the poverty datum line. Furthermore, the World Food Programme (WFP), in July 2019, estimated that 41 million people will be food insecure in 2020, with 9 million requiring immediate assistance,⁶ and this was before the 2019/2020 drought in Southern Africa.

It is not the case, however, that there has been no effect on the poor in developed countries. Some statistics indicate that Black Americans have been significantly more likely to get the virus, and deaths seem higher in this population. So poverty will be a very important factor operating in Africa.

⁶ *End-of-Season Update for 2018/19 and Overview of the Food Security Situation in 2019/20*. WFP Regional Bureau for Southern Africa (RBJ) [<https://docs.wfp.org/api/documents/WFP-0000106747/download/>]

It takes little imagination to wonder what might be the combined effects of poor nutrition, poor health and widespread poverty together with Covid-19 epidemic. And to make things worse, the World Bank indicates that Africa will experience its first recession in 25 years, and this will severely hamper governments and planners in trying to deal with both the epidemic and its long-term sequelae.

For all these reasons, planning to deal with Covid-19 crisis requires governments to consider very carefully how to mitigate the effects of this epidemic, for poor management of Covid-19 – and this is clearly a considerable problem for poor countries like Zimbabwe – can exacerbate all the other problems facing a country. It is, therefore, very important to pay careful attention to the information available on the epidemic to date. A critical issue for the ordinary citizen is the effectiveness of information provided by governments.⁷

SADC scenarios

SADC is an economic grouping of the former frontline states used to working together during the liberation struggles in the region in the 1970s and early 1990s. When the region was liberated with the end of apartheid in South Africa, the need for militarisation of the Frontline States was superseded by the stronger economic interests. Whilst there is generally reasonable co-operation between SADC states, what it has not been tested on are pandemics such as the COVID-19. We use the SADC experience to test the possible impact of COVID-19 on the people.

Some of the most reliable information is coming from a large, experienced team at Imperial College in London (UK).⁸ We will not spend great detail in either explaining the methodology nor their global findings, but the team has modelled infection spread, using information both about Covid-19 as well as information about epidemics generally. They also have included the modelling information about how social distancing has affected the spread of diseases. The modelling, thus, uses existing information about epidemics and their management, and apply this knowledge to what is known about Covid-19. This is the only way to model at present, and the researchers point out that almost everything learned of value about the disease entity in previous epidemics, such as SARS, was learned *post hoc*.

Here we are concerned to look more locally at the data that these researchers provide and look at the SADC region alone. The rationale for so doing, firstly, is that a recent threat assessment on Zimbabwe that made use of the Imperial College analysis has provoked a range of adverse comments, and, since this assessment only postulated the worst case scenario, it is worth giving a more nuanced picture. Here, it will be seen the scenario on possible Covid-19 infection in Zimbabwe was little different to the scenarios for other SADC countries.

Secondly, the value of scenarios is for planning, and, where epidemics are concerned, planning for worst case scenario is usually prudent. Here we point to great differences between countries like the South-East Asia countries (China, South Korea, etc.) and some Western European countries (Germany) that took prompt action, and other countries (predominantly Western European, such as Italy and Spain) where the delays led to serious spread and possibly unnecessary deaths.

⁷ *Toward a risk-based strategy for managing the COVID-19 epidemic: A modelling analysis*. Corona Virus Report. Alex van der Heever. 20 April 2020. Daily Maverick. [<https://www.dailymaverick.co.za/article/2020-04-20-toward-a-risk-based-strategy-for-managing-the-covid-19-epidemic-a-modelling-analysis/>]

⁸ Patrick GT Walker, Charles Whittaker, Oliver Watson *et al.* *The Global Impact of COVID-19 and Strategies for Mitigation and Suppression*. Imperial College London (2020), [doi: <https://doi.org/10.25561/77735>]

Methods

For this current report, we used the data provided by Imperial College where we extracted the data relating to Africa, and disaggregated the data relating to SADC countries. This data provided fields on total population, estimated number of infections, estimated deaths, estimated need for hospital beds and the estimated number of critically ill persons due to Covid-19. The data also provided estimates for each of these fields according to control strategy – unmitigated, mitigated, enhanced mitigation, and suppression. Estimates for of these control strategies were additionally analysed according to the degree of social distancing that might operate.⁹

Four scenarios were outlined, described below:

- A. **Unmitigated:** A scenario in which no action is taken.
- B. **Mitigated:** Mitigation including population-level social distancing.
- C. **Enhanced Mitigation:** Mitigation including enhanced social distancing of the elderly, with individuals aged 70 years old and above reducing their social contact rates by 60%.
- D. **Suppression:** The implementation of wide-scale intensive social distancing (75% reduction in interpersonal contact rates) with the aim to rapidly suppress transmission and minimise near-term cases and deaths.

Imperial College does not provide data on suppression, and hence we deal only with the first three scenarios. However, it is our view that suppression will be very difficult for most countries, not only in Africa, and probably requires either a vaccine and/or a viable treatment for the infection. Most countries in SADC are afflicted with very high proportions of weak economies, very poor people, weak health systems, and weak infrastructure, as well as many other relevant factors such as low political trust and little social capital, to give just two examples. Realistically, it is against this background in SADC countries that the scenarios should be viewed.

Controlling infection

This is obviously critical, and, given the speed with which Covid-19 can spread within a population, must be the priority for all governments. This obviously means acting as fast as is possible, not only when the virus arrives in a country, but anticipating its arrival, as it is evident, the virus is arriving in every SADC country (Table 1 above).

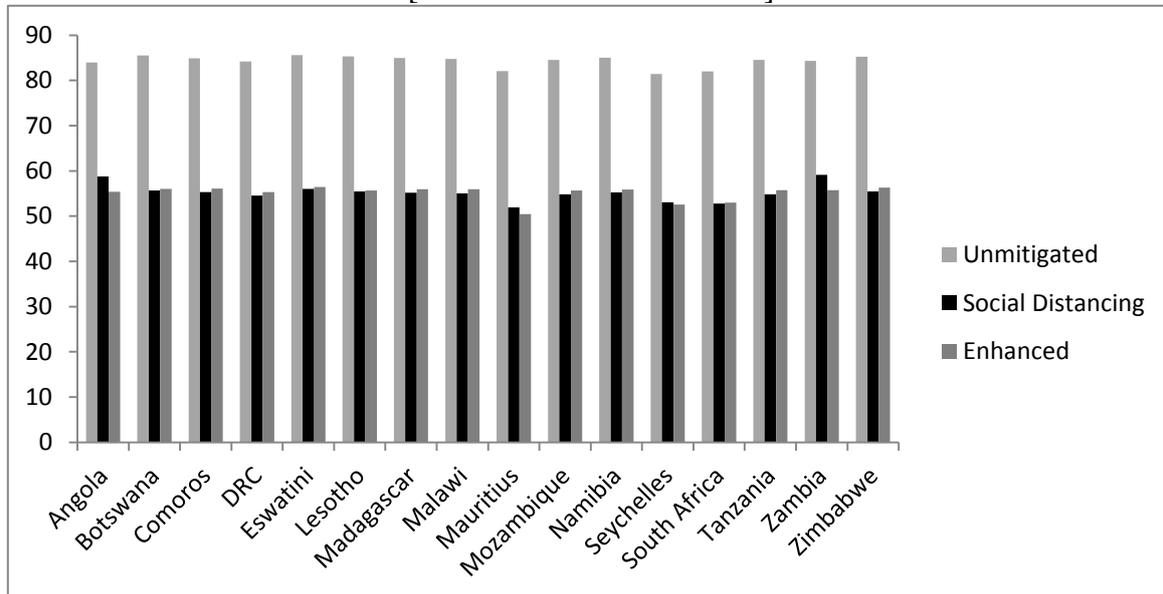
Every single SADC country has confirmed cases of Covid-19, even though the numbers are generally very small. As pointed out earlier, South Africa accounts for the majority of confirmed cases (2,208), with Mauritius (319), DRC (223), and Madagascar (104) the countries with the next highest number of cases. Zimbabwe, as at 12th April 2020, was amongst the lowest. It is worth pointing out that Mauritius and Madagascar have the advantage of being islands with obvious ease in controlling influx from other countries, but the remaining SADC countries have exceptionally porous borders. Whilst SADC countries can control formal migration into their countries, informal (illegal) migration is exceptionally

⁹ Whilst social distancing, as a percentage of the population that could effectively do this, could theoretically approach 100%, this is extremely unlikely as a significant proportion of the population will find this impossible due to the nature of their work. Here consider essential workers (health personnel, police, etc.). Thus, total social distancing in any population is impossible, but interacting in a safe manner (masks, protective clothing, etc.) will mitigate this.

difficult to control. The illegal emigration into South Africa from other SADC countries is an obvious example.

Figure 1: Total infections by the end of the pandemic according to control strategy adopted (%)

[Source: Walker et al. 2020]



The first point to note is the effect for every single SADC country if there is no attempt at mitigation. (*Unmitigation*). Every single SADC country could expect more than 80% of its population to get infected. This is the baseline and it is extremely unlikely that a country would not take mitigation steps, and obviously all countries are doing this. Some Western countries that took a slightly cavalier approach to the epidemic at the outset have paid a serious cost in human lives. The point of postulating an unmitigated scenario is merely to reinforce how serious the problem is and how infectious is Covid-19. This is not a problem to take lightly, and requires urgent action, even when the reported cases seem comparatively small in number.

The next point is looking at the next mitigation strategies, *Mitigation* and *Enhanced Mitigation*. As can be seen in Figure 1, both strategies, using social distancing (and the accompanying hygiene measures) reduce the infection rate markedly, but still the model estimates that about half of the population will still get infected. There is little difference between the two strategies for SADC countries: increasing social distancing and isolating the elderly does not seem to alter the morbidity much. This is somewhat different to other regions in the world, where the effects of isolating the elderly have a more pronounced effect in the *Enhanced Mitigation* strategy. Comparison of the geographic regions shows comparatively the least effect in Africa for *Enhanced Mitigation*. It will be much difficult to isolate the elderly in Africa, and SADC, as most live within families, and many live within very poor families at that.

This is a pessimistic picture, but should not be taken as strictly predictive. There are so many factors, including the response of a government. Here it is worth taking note of the aggressive approach of the South African government, and the demonstration that South Africa is showing signs of “flattening the curve”. It is also worth noting that the South African government is looking at a long-term strategy, anticipating a surge after the lock down, and then applying comprehensive testing and tracking, as well as looking at long-term *Enhanced*

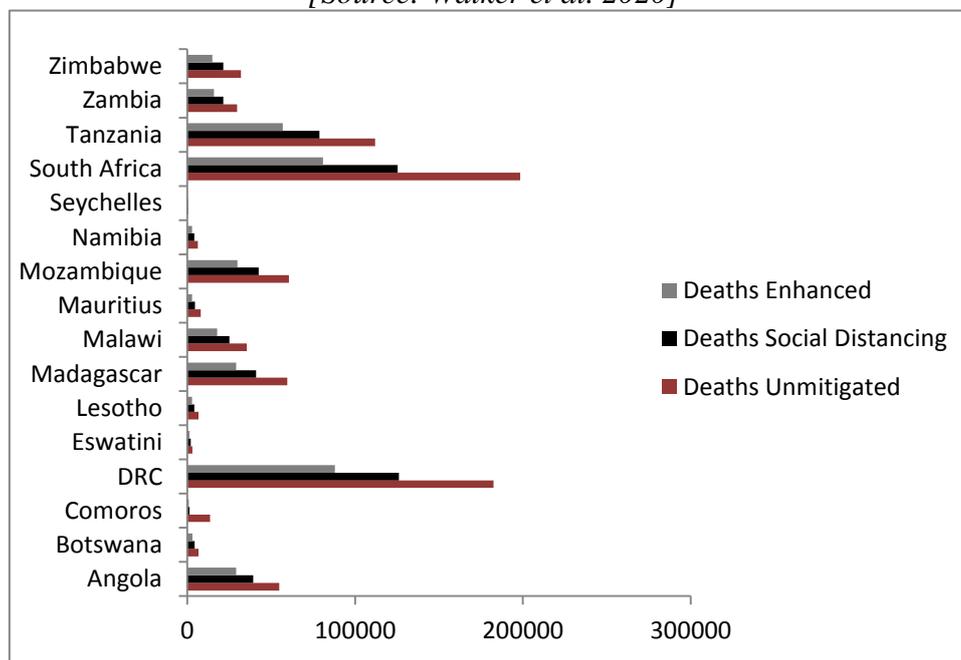
Mitigation. Much could be learned from the South African approach, although the resources for undertaking this will be problematic for most SADC countries.

The Human Costs

Above it was shown that there appears little difference between the two control strategies in reducing infection, and what is evident that social distancing (and the accompanying hygiene activities) is the obvious first line approach. It is obviously important to reduce infection in order to prevent deaths. The Imperial College models look at this, the most serious consequence of Covid-19.

Figure 3: Total deaths due to Covid-19 by the end of the pandemic according to control strategy (%)

[Source: Walker et al. 2020]



The first point to make is that the variation in overall numbers across the SADC countries is related to population size in each country. As seen in Figure 3, the effects of the control strategies have pronounced effects on the death rates in SADC countries. Whereas there is little comparative difference between *Mitigation* and *Enhanced Mitigation* in reducing infection, they are large suggested differences in reducing deaths, with *Enhanced Mitigation* clearly making a difference, and for every SADC country.

Thus, if there was a sense that only *Mitigation* (high rates of social distancing) was necessary, it seems evident that isolating the elderly makes an important difference, and countries would be wise to adopt *Enhanced Mitigation*. This is what South Africa will do, keeping those over 70 years or more, and those with vulnerabilities, under voluntary, partial lockdown for the next six months.

The Pressure on Health Services

The front line in dealing with Covid-19 is obviously the capacity of a country's health services, and it has been instructive to see how overwhelmed so many developed countries' health services have been. The front line health care is very important in addition to the control strategy, and managing those needing critical care, and here SADC countries, and African countries, will be at a major disadvantage in comparison to wealthier countries.

Table 2: Total needed hospital beds and numbers needing critical care by the end of the pandemic according to control strategy.

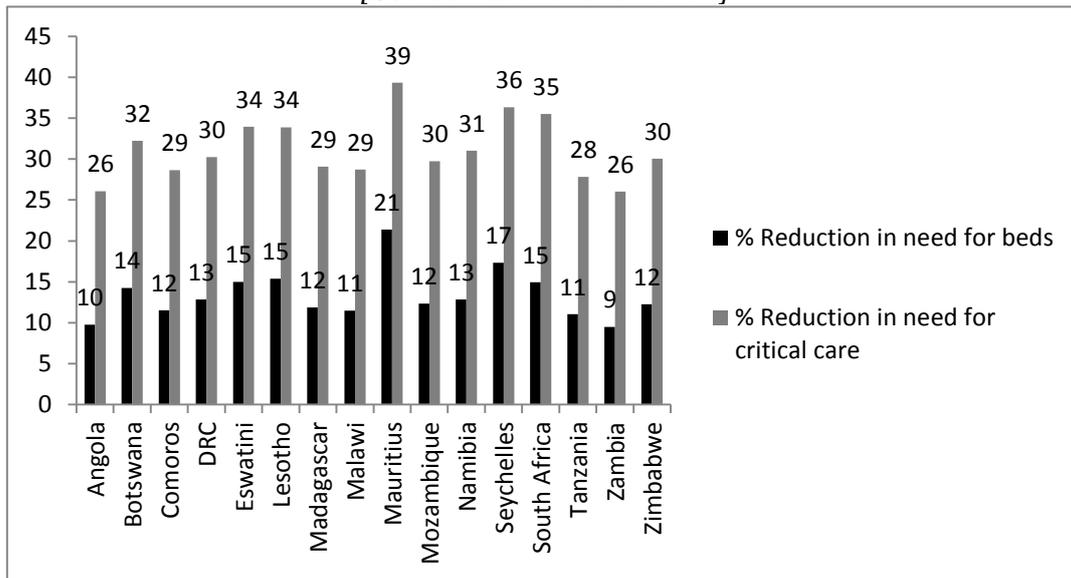
[Source: Walker et al. 2020]

| | Unmitigated | | Social Distancing | | Enhanced | |
|--------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | Total Hospital beds | Total Critical Care | Total Hospital beds | Total Critical Care | Total Hospital beds | Total Critical Care |
| Angola | 412190 | 72505 | 283832 | 52128 | 256110 | 38534 |
| Botswana | 43670 | 8787 | 28280 | 5753 | 24250 | 3898 |
| Comoros | 13493 | 2511 | 9007 | 1725 | 7968 | 1231 |
| DRC | 1240046 | 241850 | 840947 | 167266 | 733058 | 116697 |
| Eswatini | 18493 | 3857 | 12355 | 2592 | 10501 | 1712 |
| Lesotho | 40750 | 8699 | 26249 | 5618 | 22208 | 3715 |
| Madagascar | 417621 | 79082 | 279723 | 54384 | 246499 | 38569 |
| Malawi | 254686 | 46963 | 174492 | 33221 | 154488 | 23681 |
| Mauritius | 40748 | 11319 | 23768 | 6046 | 18683 | 3669 |
| Mozambique | 422211 | 80308 | 288304 | 56227 | 252706 | 39507 |
| Namibia | 41781 | 8244 | 27558 | 5532 | 24013 | 3817 |
| Seychelles | 2635 | 619 | 1616 | 377 | 1336 | 240 |
| South Africa | 1296214 | 262976 | 844522 | 166202 | 718401 | 107205 |
| Tanzania | 819796 | 148339 | 557620 | 104506 | 496047 | 75430 |
| Zambia | 227998 | 39200 | 157632 | 28452 | 142676 | 21044 |
| Zimbabwe | 213130 | 40842 | 144424 | 28316 | 126738 | 19810 |

The table above shows the estimated needs for hospital beds and the number of people that will need critical care according to the three different scenarios. It can be seen that the numbers needing hospital beds and critical care roughly halves as the different strategies are applied. For example, in the *Unmitigated* scenario Zimbabwe would need 213 130 beds and 40 842 people would need critical care, but, with *Enhanced Mitigation*, the number of beds needed would drop to 126 738 beds and 19 810 people would need critical care. Clearly, the more aggressive the control strategy, the better is the outcome. As seen in Figure 3 (over), the reductions in the need for beds and critical care are a serious magnitude, 13% on average in the needs for beds and 31% in need for critical care. This strongly supports the need for *Enhanced Mitigation*.

Figure 3: Changes in needs for hospital beds and critical care as a result of using Enhanced Mitigation over Mitigation only by the end of the pandemic.

[Source: Walker et al. 2020]



However, the needs are way in excess of anything that can be provided in Zimbabwe, as would be the case in virtually every SADC country. Of course, every country has the same needs overall, but the capacities are very different. For example, as the authors of the Imperial College report indicate, low-income countries have, on average, 1.24 beds per 1,000 of population, whereas high-income countries have 4.82 per 1,000 on average. Low income countries have only 1.63 ICU beds per 1,000, whilst high-income countries have, on average, 3.57 ICU beds per 1,000.

Zimbabwe had 1,848 facilities in total, with 214 hospitals, according to the National Health Strategy (2016-2020). This would have provided the country with 15 beds per 10,000 of the population, which means a little over 22,000 beds. As can be seen from Table 2, the need in the best case scenario of *Enhanced Mitigation* is nearly six times more than the country could provide: 126 738 needed as compared with approximately 22, 294. This is likely to be the situation in many SADC countries. Again this calls for an aggressive control strategy, and a long-term one at that.

Pressure on Health Workers

The pandemic will obviously provide a serious challenge for the health services. Apart from shortages of hospital equipment and drugs, SADC needs also a cadre of dedicated health professionals. These are in short supply due to strenuous working conditions and poor remuneration. Health professionals - technicians, nurses, physiotherapists, psychiatrists, pharmacists and doctors – have left their countries in droves for better paying jobs in South Africa, Europe, USA, Australia, New Zealand, and even some Arab countries. Many of those that have remained majority have taken to private practice, leaving state institutions understaffed and under-resourced. At the outbreak of the pandemic, the doctors and nurses in Zimbabwe, for instance, were striking for better working conditions. Even in less than the worst case scenario, *Enhanced Mitigation*, health systems are unlikely to cope.

Conclusions

What is the value of modelled data? The Covid-19 modelling by Imperial College cannot be predictive of every country and all the factors that will apply differently in the countries around the world, but it does give those planning a sense of how to go about thinking about the problems that they face. The broad parameters indicated in the models allow planners to examine the most useful way to approach the epidemic, and, within the chosen parameters, to apply other strategies to complement the broad strategy.

It is obvious that no country in SADC will choose not to apply a control strategy, and all of them are. This would be the height of irresponsibility, and no neighbouring country would accept this: SADC countries are far too inter-related and there needs to be a concerted regional response given the common problems of food insecurity and porous borders. South Africa seems to have the most developed strategy at present, and probably has the best resources for tackling Covid-19. There may be much for all to learn from the South African strategy.

The choice of intervention seems clear from the modelled data. Although it does not appear from the data on SADC countries that either *Mitigation* or *Enhanced Mitigation* may have differential effects on reducing infections, it is also clear that *Enhanced Mitigation* will have a better effect in reducing deaths and in lowering the burden on the health systems of the countries in SADC. Lowering the burden on health systems and health personnel will be crucial in most SADC countries: it will be as important to protect the latter as the populations that they must serve.

There are many aspects of the virus that remain unknown. For example, and as pointed out earlier, the youth bulge in Africa and SADC may be a protective factor, but this may also be minimised if the virus behaves differently in populations that have poor nutrition, poor health generally, and live in large unsafe environments. In the meantime, it would seem wise for countries to pay heed to the available information about what the scale of the epidemic *might* be like, and take heed of the advice that the modelling suggests is the most likely way to minimise the effects.