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‘THE COVID-19 PANDEMIC AND SOUTH AFRICA’S RESPONSE’: A DISCUSSION WITH PROFESSOR SALIM ABDOOL KARIM

South Africa instituted a 21-day national ‘lockdown’ on 26 March 2020, when the country had fewer than 100 reported cases of COVID-19. After 14 days President Cyril Ramaphosa extended the lockdown for a further two weeks, until the end of April. At the time of publication, South Africa had reported 2,415 confirmed cases of COVID-19, and 27 deaths.

The Daily Maverick’s Mark Heywood, editor of ‘Maverick Citizen,’ hosted a webinar on 8 April with Professor Salim Abdool Karim, Chair of South Africa’s Ministerial Advisory Committee (also known as the ‘command council’) on COVID-19 to discuss South Africa’s approach to the pandemic – especially with regard to the millions of people in South Africa who are living with HIV and TB. This article is an edited transcript of the interview, reproduced with the permission of the Daily Maverick.

On how COVID-19 spreads, and the point of ‘lockdown’:

Salim Abdool Karim: The starting point is that we are all at risk. This virus cannot move on its own – it moves because we move. So fundamentally our behaviour and the way we interact with our fellow human beings determines how this virus behaves. We knew this was coming – we are a highly globalized world, we have people moving all the time. I chaired a government advisory group on pandemic preparedness but nothing that we discussed got us ready for this situation. Lockdown is about reducing the human interaction that facilitates this spread of the virus, from one person to the next. So any person who is infected, if they are not interacting with people, you reduce the reproductive rate [of the virus] – and the net effect is you ”flatten the curve”.

On the overwhelming of health systems:

SAK: When you see this exponential growth [such as in many countries in Europe and in the United States], with the number of cases increasing very rapidly, what happens is that numbers of people who are sick and need substantial care rise.

We know from 45,000 patients in China that about 81% get a very mild version of the disease, and a small proportion are asymptomatic. It's that 19% that need medical care that's significant. [Of all patients] 5% require critical care. The number of ICU beds and ventilators is very small. Each hospital has a small number. When you have high growth of the 5% that need significant medical attention, the system gets overwhelmed.

On COVID-19 and patients living with HIV:

SAK: In HIV patients we do not yet know how this virus is going to play out. We asked [the Chinese] about disease progression in patients with HIV. They had 1 patient in all those 76,000 [the number of people who had tested positive for COVID-19 at that time], who was on ARVs, and was virally suppressed. The Italians and the U.S. will give us better clues. If I were asked to speculate – this is not based on evidence – I think we're going to find that patients who have HIV who are virally suppressed will be impacted at a slightly worse level of disease progression than people who are HIV-negative. But I am deeply concerned about those who are HIV-positive and who have viral loads that indicate they're immunocompromised – they may have disease course that is much more in line with the elderly patients we've seen [in China and elsewhere].

On the risk to people living with HIV in South Africa, 2 million of who are HIV-positive but not yet on ARVs and therefore not yet virally suppressed:

SAK: With HIV, from the day you get infected to the day you have clinical illness is on average seven years; with COVID-19 it's seven days. That's the concertina timeframes that we're dealing with. It should be pointed out that when you're looking at a problem like COVID-19, and the number of people here at risk – it is estimated that 2 to 2.5 million are HIV-positive and not yet on ARVS – and if you work on 1 in 5 being immunocompromised (with a CD4 count lower than 350) then we have half a million people who are going to be hit – those are young people who are walking around in our communities, and they are at risk.

On whether South Africa's lockdown, imposed on 26 March, is showing signs of 'flattening the curve' (on April 7 South Africa had 1749 confirmed infections; on April 13 it had 2,139):

SAK: It's difficult to tell – because when you look at cases you have to appreciate that when we say there was a case today, that represents an infection that occurred about 2 weeks earlier – there's a 7-10 day incubation period for the virus, then the test, then wait for the result. So by the time we have your result it's somewhere between 12 to 15 days. If we base it on that, the cases we see today reflect infections that occurred on average about 14 day ago. So the infections we're seeing now occurred prior to the lockdown. We can't really tell based on the cases we're seeing now.

I don't know if this virus is spreading in the community. So looking at numbers we can tell are we seeing community transmission or not. I really worry that the conditions in this country make it difficult for large sections of our comm to institute handwashing on a regular basis, and social distancing – so the two main tools we have are hard for a large part of our community.

In every other country, it came upon them so rapidly that before they knew it the epidemic showed itself in the long queues of people coming into hospital. South Africa went a different route. We said we're not

going to wait for that. Instead we're going to go into the community and look for where this virus is, before people come to the hospital. We're going to be proactive, get ahead of this virus, wewant to see how it is spreading within our communities. You heard the President [Cyril Rampahosa] announce that we'll have Community Health Workers going house to house. The latest estimate is that 28,000 Community Health Workers will be screening people for symptoms. If they have symptoms they will be referred to a clinic for a test.

On ending lockdown measures:

SAK: If I wanted to know whether we are in a position to end the lockdown, it really revolves around how well do we understand community transmission – and if we see from Community Health Workers already in the field that we are receiving enough specimens, and testing them and not seeing a substantial number of positive cases, that will be very reassuring – lockdown is then having the desired effect.

If we see that [transmission] is localized, in a few communities, then we can make a decision about whether we want to ease the restrictions – what we may want to do then is take a 'partial' decision. If in the end we're not seeing community transmission and that we have the wherewithal to continue our ongoing surveillance with lots and lots of testing, then lifting the lockdown makes a lot of sense because then we're seeing the virus is not spreading. If we go back to our old behaviours, we're back to square one. We're going to have to change many of our behaviours even beyond the lockdown.

There's also many models that have looked at what options we have. Some models say release the lockdown for a week or so and then reimpose it. That approach is being promoted in many instances. In China, their approach was to just go for one really long lockdown – 77 days – almost three months. They are convinced they have no community transmission. Wuhan shows you can actually get to a stage where you have no local transmission – but you've got to worry about the cycle starting again with people travelling and bringing the virus back into the situation.

On the majority (80%) of testing having been done in the private sector and the challenges of scaling testing up in the public sector:

SAK: 83% of South Africans depend on the public [health] sector, and we've only done 55,000 tests [at the time of publication South Africa had done 83,000 tests] so we actually don't know where the epidemic is because we're just not testing enough (in a population of 55 million). So we created a definition that was highly restrictive – we focused on the 'first wave'; (travelers) and the second wave (people they'd been in contact with) – but we didn't factor in the third wave (community transmission), so we were behind the curve on this one. It's an area in which we fell short. The net effect is we're now playing catchup. We should be doing several thousand tests a day. We need to be doing in the tens of thousands of tests every day in the public sector. The private sector played an important role in the first wave. Unfortunately our criteria were stuck in a mode that became outdated. We should have changed our criteria about 2 weeks earlier. Last Friday [April 3] we changed them. We're hoping that now with community-based testing we'll increase our numbers substantially. [Prof Karim also raised the issue of a shortage of commodities for testing such as the reagents required for the tests' analysis.]

On African participation in drug and vaccine testing:

We can’t make policy [based on hypothesis] – we have to have evidence. That goes to the importance of Africa and South Africa participating and being in the forefront of treatment studies and vaccine studies. If we leave them to the U.S., and Europe, if they are shown to be effective [there], we simply don’t know whether they will work in Africa. The reality is – and we know this for HIV – that if we do not get in at the front door of the research, we have to join the back of the queue when these things work. We don’t wantto be in that situation – we have to be part and parcel of these studies.

On April 13, in a nationally televised Zoom meeting to brief media on the science behind the South African government’s decisions on COVID-19, led by South Africa’s Minister of Health Zweli Mkhize, Prof. Karim reiterated the concern shared at high levels about South Africa’s 2-2.5 million HIV-positive people who are not on antiretrovirals (of the country’s 7.7 million HIV-positive people in total) and who are likely to have low CD4 counts, making them potentially more susceptible to being infected with COVID-19. Prof. Karim also said he thought it was unlikely that South Africa could escape “the exponential curve” of a rapid rise in cases, but that so far the country had succeeded in “buying time” in order to prepare better to manage the epidemic. He cautioned against ending the country’s lockdown abruptly, saying that would undo everything South Africa has achieved with it so far.

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