Public health sector capacity and resilience building in Zimbabwe: An urgent priority as further waves of COVID-19 are imminent

To the Editor: Zimbabwe, like most countries, has experienced several waves since the onset of the global COVID-19 pandemic. The third wave between June and August 2021 was characterised by an exponential increase in incident cases, accompanied by corresponding rapid rises in numbers of patients requiring medical attention, hospitalisation and intensive medical care. The public health sector was overwhelmed and failed to cope with the rapid rise in the case burden. Shortages of human resources, consumables and admission space contributed to the challenges at the clinical level, while the capacity to test, treat and isolate confirmed cases as well as surveillance of active cases were severely compromised. This situation exposed the inadequacy of the public health sector, while the majority of the population cannot afford to obtain treatment from the alternative source of care, the private health sector. As further waves of the COVID-19 pandemic are likely owing to the emergence of newer variants of concern, pandemic fatigue, complacency and increased human mobility, the country needs to build its public health sector capacity and resilience in preparation for absorbing shocks associated with such events. This calls for urgent action on the part of the government, public health authorities and all involved in public healthcare to come up with solutions that ensure accessibility, affordability and sustainability of quality healthcare in the public sector.

Scholarly mathematical projections in early 2020 when the COVID-19 public health emergency was declared a global pandemic predicted that sub-Saharan Africa (SSA) would be severely affected by the rapidly spreading virus, which was perceived as a serious global health threat.[1] Healthcare systems in SSA were described as fragile, and it was anticipated that they would fail to cope with sudden surges in the demand for emergency healthcare.[2] It was postulated that direct and indirect mortality from COVID-19 would be disproportionately high in the region. In Zimbabwe, however, throughout the surges referred to as the first and second waves, incident and cumulative cases as well as relative morbidity remained low, with <35 000 cumulative cases and <1 600 deaths by the end of January 2021, when the second wave began to wane.[3] Comparatively, however, the case fatality rate (CFR) was higher, at 3 - 4%.

The third wave, which started around June 2021, behaved differently. Cumulative cases trebled over a 2-month period. At the end of May 2021, these were estimated at ~38 000, but by the end of July 2021, they had risen to 120 000. Owing to under-testing, under-reporting and inadequate surveillance, the actual disease burden may be much higher.[4] In November 2021, South Africa (SA) announced the discovery of a mutated Beta variant named Omicron. By early December 2021, the Omicron variant was detected in Zimbabwe, driving a short-lived fourth wave which settled by January 2022.

In this letter, I describe the inadequacy of the public health sector in Zimbabwe in handling the previous waves, and stress the need to prepare adequate capacity and resilience to handle further epidemic waves of COVID-19, which are imminent.

Public health sector inadequacy

The second and third waves in Zimbabwe, which occurred from December 2020 to January 2021 and from June to August 2021, respectively, exposed the inadequacy of the public health sector in Zimbabwe. Sudden surges in symptomatic COVID-19 disease cases requiring hospital admission, supportive treatments and high-dependency and intensive care imposed unprecedented strain on the country's public health sector.[5] There were widespread reports of shortages of admission space in public hospitals and healthcare workers (HCWs) being overwhelmed. Consumables such as oxygen and personal protective equipment (PPE) were widely reported to be in short supply, leading to both patient and HCW frustration. Years of poor remuneration and deplorable working conditions resulted in an exodus of skilled HCWs to countries that would pay them better. The brain drain, which has always been a serious threat to the public health sector in Zimbabwe and other African countries, has worsened during the COVID-19 pandemic, with migration of skilled individuals such as intensive care nurses, theatre nurses and midwives. Without an attempt to address the concerns of the remaining HCWs, there has been a resultant increase in frustration. Fear of contracting SARS-CoV-2 owing to lack of adequate PPE, and without medical insurance cover, has been reported to have worsened the situation.[6]

Resources for COVID-19 surveillance, which is an essential pillar for control of the pandemic, were also reported to be lacking. These include both human and material resource challenges, resulting in reduced capacity for active case finding, sentinel surveillance and contact tracing, all of which are essential for control and guiding strategy. Local capacity for genomic sequencing is lacking, resulting in shipping of specimens to international collaborating institutions, and delayed knowledge of circulating variants. The public health sector's ability to conduct large-scale polymerase chain reaction (PCR) testing is also limited, even to date. The government therefore had to adopt the cheaper rapid antigen tests, which have sensitivity and specificity lower than those of PCR. Shortages of blood products and essential medicines in the public sector were also reported, with the shortage of blood products partly a result of school closures, since schoolgoing children constitute the majority of blood donors, but largely due to a shortage of processing chemicals, as was reported by the National Blood Transfusion Services of Zimbabwe authorities.[6]

Unaffordable alternative healthcare sources

The alternative source of medical care is the private sector. Unfortunately, in a country with formal unemployment rates in excess of 90%, and a similar proportion of the population without medical insurance, the private sector is beyond the reach of the majority. Without access to medical treatment in either the public or the private healthcare sectors, the population has turned to home-based care and complementary medicine as alternative sources of treatment. There have been reports of rampant use of home remedies and unapproved treatments, and the irrational use of oxygen concentrators at home. These factors may have contributed to delayed presentation to hospitals, with advanced disease requiring advanced treatment, and the high CFR. At 3.4 - 4%, Zimbabwe has one of the highest CFRs globally. The lack of treatment space for COVID-19 patients, and the shift in priorities to treatment and public health responses to this disease, may have led to increased excess mortality from non-COVID-19 causes.[6] Without robust surveillance, the actual burden remains unknown; however, it is noteworthy that there have been increasing reports of community deaths, some of which never get to be formally registered.

Further waves are imminent

The third epidemic wave of the COVID-19 outbreak in Zimbabwe settled by the end of August 2021. However, new SARS-CoV-2 variants of concern continue to emerge globally.[7] A newer variant named Omicron was detected in some provinces of SA and Botswana

in November 2021, and by early December 2021 the same variant was detected in Zimbabwe, driving a short-lived fourth wave. Unlike the two preceding waves, there were no significant reports of increased hospitalisation, morbidity and mortality. The Omicron variant has several mutations and reduced susceptibility to some current vaccines. The characteristics of future variants are unknown, and the possibility of more severe disease from new variants yet to emerge remains real. Past experience has shown that the epidemic waves in Zimbabwe closely follow those in SA, owing to the close economic ties and movements between the two countries. During the first wave, the majority of cases that occurred in Zimbabwe were imported from neighbouring countries, with SA accounting for the majority, while the Beta variant, which was responsible for the majority of cases in Zimbabwe during the second wave, had its origins in SA. Similarly, the trends of the third wave in Zimbabwe closely mirrored those of the same wave in SA. With the emergence of newer variants and waves in SA, the possibility of accompanying waves is always high in Zimbabwe. Unfortunately, despite some collaboration with the Quadram Institute in the UK, Zimbabwe lacks the capacity for timely genomic sequencing to determine the circulating variants, information that would be crucial for informing public health interventions including the effectiveness of vaccines in use.

Zimbabwe was among the first African countries to initiate population-wide SARS-CoV-2 vaccination, and has made significant strides, with almost 50% of the population fully vaccinated to date. However, this figure is well below the 70 - 90% that is the estimated herd immunity threshold to realise population benefits of vaccination. As in many other countries in Africa, including SA, there is still marked vaccine hesitancy, and the government needs to devise innovative ways of improving vaccine uptake. Additionally, pandemic fatigue is resulting in increased human complacency and marked reluctance to abide by infection prevention and control measures such as wearing of facemasks, hand hygiene and physical distancing, which are critical for outbreak control. The public constantly needs to be reminded about these effective prevention strategies. Once numbers settle and control restrictions are eased, population mobility and complacency will increase as people turn to bread-and-butter issues. Further waves of COVID-19 in Zimbabwe are therefore imminent.

Urgent need to build public health sector capacity and resilience

The high possibility of further waves of COVID-19 in Zimbabwe means that urgent prioritisation of building public health sector capacity and resilience is needed, with the understanding that it is the responsibility of the government to provide quality healthcare to the population. The government must put in place measures to ensure adequate capacity to respond to further waves of COVID-19 without compromising care for other important causes of human morbidity and mortality. These measures include the capacity for testing, treating and isolating confirmed cases of COVID-19, and contact tracing and appropriate quarantining of contacts, which are the cruxes of control during acute surges.[8] Meanwhile, there is a need to continue addressing vaccine hesitancy, urgently acquiring more vaccines, and accelerating vaccinations to levels sufficient to confer herd immunity on the population.[9,10] SSA, with its fragile economies and healthcare sectors, needs a vaccinated population to mitigate against mortality and hospitalisations with symptomatic and severe COVID-19. On the other hand, the public health sector must build capacity for treating COVID-19 patients. This includes addressing the current bed capacity and HCW challenges, acquiring and stocking adequate amounts of PPE and other consumables, and building local capacity to produce oxygen.[6] Addressing HCW challenges, including remuneration and insurance, is key to driving COVID-19 care and prevention programmes, including vaccination.

Conclusions

The government of Zimbabwe must set building health capacity as one of its key priorities for providing sustainable, efficient and quality healthcare in the public sector. This requires concerted efforts and commitment from the government, public health stakeholders and all key players involved in healthcare provision for the population.

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