Why SARS-CoV-2 Vaccination Still Matters in Africa

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We are now two years into the pandemic caused by SARS-CoV-2 infection. The virus has spread globally to all countries and territories, excepting a few isolated Pacific islands where entry criteria have remained strict. Africa was relatively spared from the magnitude of confirmed infections and deaths experienced in other parts of the world in the initial stages of the pandemic,[1] a situation that has not been maintained more recently.[2] The upsurge in clinical case reports in the latter half of 2021 has brought into sharp relief the pressing need for the continent not to be lapped in the race to vaccinate the global community.

While SARS-CoV-2 vaccination campaigns to lessen the effects of the COVID-19 pandemic have been implemented in the Global North, a combination of irregular and insufficient vaccine supply, a lack of resources to deliver doses and vaccine hesitancy has led to poor vaccine uptake in many parts of Africa. This is compounded by the fact that pharmaceutical companies have often delivered stocks of vaccines that are surplus to the requirements of industrialized nations, often with short expiry dates, to countries where there is inadequate infrastructure to distribute and administer these on time, if at all.[3]

Vaccine skepticism is growing on the continent, owing to the perception that they “do not work” and therefore that the need for vaccination is somehow obviated. The notion that it is better to contract the virus for stronger immunity is prevalent in many African countries. However, lessons can be drawn from the other six coronaviruses known to infect mankind, four of which cause the common cold.[4] The immunodominant spike proteins of these common cold viruses constantly mutate, as a result of which, prolonged natural immunity to them is limited.[4] We know that SARS-CoV-2 is also rapidly mutating, more easily in unvaccinated populations. This has recently been highlighted by the emergence of the now globally predominant omicron variant, which first came to light in southern Africa.[5]

We argue that the key public health message that should be conveyed by health authorities and governments across Africa is that rather than being completely preventative, SARS-CoV-2 vaccination is critically important to whole communities. This is because immunization acts to lessen the severity of COVID-19 infection at the level of the individual, while reducing the transmission risk and thereby the potential pool for viral variants to develop at the population level.[6]

As with other coronaviruses, herd immunity to SARS-CoV-2 is unlikely to develop naturally, because of the innate capacity of all coronaviruses to consistently and rapidly evolve,

rendering any prevailing immune response less effective.[4] We suggest that while many, if not most, of the viral variants generated are of little clinical significance, it is probable that there will be further SARS-CoV-2 outbreaks due to “variants of concern” arising for some time to come.[5]

Although eschewed by many, vaccination serves a role to contain viral exposure and thus limit the potential for yet more outbreaks. Of note, as of October 2021, only 77 million people had been double vaccinated in Africa, which is less than 6% of the total population of fast approaching 1.4 billion.[7,8] We urge the governments of African nations not to relax their resolve to vaccinate their populations, as hospital admissions and deaths can potentially be prevented. In this regard, we support the mechanisms for equitable access to SARS-CoV-2 vaccines provided by the strategic partnership of the African Vaccine Acquisition Task Team (AVATT) of the African Union and the WHO-led COVID-19 Vaccines Global Access (COVAX) initiative.[9] However, this alliance is increasingly reliant on fundraising initiatives and private donations and requires much greater global support.

Funding: None
Competing interests: None declared
Ethical approval: None required

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