


Race Against the Clock: On the Transmission Dynamics of COVID-19 in Africa [Letter]

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Dear editor

We have read the paper by Jemal and Alemu,¹ in which they have presented their modelling of COVID-19 transmission dynamics in the five African Countries that include: South Africa, Morocco, Tunisia, Ethiopia, and Libya. We congratulate the author on their work. Simultaneously, being concerned for a few factors that may lead to divergence from the reality in terms of the results and its interpretations of the model, we want to share our outlook on the study.

The authors said that on 7th February 2022, the SARS-CoV-2 virus had spread to 58 African countries. South Africa was regarded as the most densely hit country of the continent with over 3 million cases and over 95 thousand deaths, and a basic reproduction number (R_0) of 7.02. South Africa was even though reported to undergo severe control measures for COVID-19 prevention which included the government's call for the National State of Disaster, lockdowns, and travel bans.² In comparison, on March 2022 in Pakistan, the National Command and Operation Centre (NCOC) declared COVID-19 to had normalised after infecting over 1 million and causing over 30 thousand deaths, and hence lifted all the restrictions.³ The R_0 reported for Pakistan was approximately 1.05.⁴ Lessons that can be learned from Pakistan's response to the pandemic include full as well as smart lockdowns, awareness campaigns, quarantines and contact-tracing, and organization of screening camps with mass-testing.⁴

The authors informed that host defense response against the virus is influenced by vaccination against SARS-CoV-2, presence of co-morbidities, age, and previous infection. Moreover, nutritional status is also a major factor of the host's immune response, more importantly since African nations are poverty-stricken.

In the SIMCR model, the authors have considered the susceptible and the infected groups. Asymptomatic cases of COVID-19 can also be thought to be virus-transmitters while they are infected and may miss the diagnosis of being infected with COVID-19 because they may have nearly no symptoms. Hence, according to this model, the place of the asymptomatic cases is ambiguous.

The authors have concluded that by vaccinating half of the African population especially residing in South Africa, Morocco, Tunisia, Ethiopia, and Libya, in 30 years approximately 17 million of them can be prevented from getting COVID-19 and millions of lives can be saved. However, a number of African countries have been reported to suffer from an outbreak of measles infection, which is a concern because measles can erase the memory of the immunity gained from vaccination against COVID-19.⁵ Therefore, a thorough consideration and adequate action along these lines are warranted to curb the pandemic effectively.

A model of the transmission dynamics of COVID-19 is always needed to call attention and warn towards the rising number of infections. In conclusion, it is our responsibility to shrewdly and carefully interpret the results of the models and sternly implement the most comprehensive and smart actions needed to avoid any unintended and preventable harm in a country like Africa.

Disclosure

The authors report no conflicts of interest in this communication.

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