

# SUB-SAHARAN AFRICA TACKLES COVID-19: CHALLENGES AND OPPORTUNITIES

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As of May 2020, the global COVID-19 pandemic had reached 187 countries with more than 3.7 million confirmed cases and 263,000 deaths. While sub-Saharan Africa (SSA) has not been spared, the extent of disease is currently far less than in Europe or North America leading some to posit that climatic, genetic or other conditions will self-limit disease in this location. Nonetheless, infections in tropical Africa continue to rise at an alarming pace with the potential to soon exceed health resource availability and to exhaust a health care workforce that is already grossly under supported and ill-equipped. This perspective outlines the context of COVID-19 disease in Africa with a focus on the distinctive challenges faced by African nations and a potential best path forward. *Ethn Dis.* 2020;30(4):693-694; doi:10.18865/ed.30.4.693

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## EPIDEMIOLOGY

As of May 2020, more than 3.7 million COVID-19 cases in 187 nations had been reported.<sup>1</sup> Forty-five sub-Saharan (SSA) countries, constituting

a total population of 1.2 billion, had reported 22,376 cases and 899 deaths.<sup>2</sup> Seven of these countries (South Africa, Algeria, Cameroon, Ghana, Nigeria, Guinea and Côte d'Ivoire) account for more than half (71% of cases) the disease burden in the region.<sup>2</sup>

Expectedly, there are concerns that the number of cases from SSA do not represent the true picture of the pandemic in these countries and there are urgent calls for more tests to be conducted. For instance, it is suggested that a country with Nigeria's population (approximately 200 million) should be conducting 5,000 to 10,000 tests daily; whereas, Nigeria only achieved a testing capacity of 1,500 per day in May, up from 100 tests per day in April.<sup>3</sup> Other reasons for the lower number of COVID-19 cases in SSA may be due to low transmissibility because of climate-specific, genetic and cultural differences that were also observed during the 2003 severe acute respiratory syndrome coronavirus (SARS-CoV) outbreak. These factors include living outdoors to a greater extent, the effect of ultraviolet sunlight on surface virus, and the higher temperatures and humidity in the tropics.<sup>4</sup>

## CHALLENGES

Health care needs in high-income-countries (HICs) have focused on the

availability of testing, personal protective equipment (PPE), intensive care unit (ICU) beds and ventilators. Populations in SSA nations must additionally grapple with even more basic problems, such as the availability of clean water. Hand hygiene is a basic way to prevent the spread of SARS-CoV-2 and frequent hand washing with soap and clean water or 60% ethanol hand sanitizer for at least 20 seconds is a key prevention protocol. In SSA, hundreds of millions of people do not have access to improved sources of drinking water, and there are an estimated 1.6 million deaths per year attributed to diseases spread through unsafe water, poor sanitation, and lack of hygiene.<sup>5</sup> Furthermore, febrile illnesses like malaria are endemic in Africa and complicates timely detection of COVID-19 without readily available testing.

Managing COVID-19 patients requires a robust health care infrastructure including both personnel and resources, each of these are highly vulnerable, if not lacking in many SSA countries. The poor ratio of physicians to patients, lack of hospital beds, ICU beds, and ventilators are linked to weak health care infrastructure, relatively small health care budgets, and a lack of local capacity for manufacturing essential medical supplies and medications.

Social distancing plays an important role in reducing disease spread;

however SSA countries can be negatively impacted by these measures as more than half the population are self-employed micro-entrepreneurs involved in petty trading, taxi/motorcycle rides services, handiwork manufacturing and other activities that are dependent on social contact.<sup>6</sup> The severe loss of income for large segments of the population combined with the inability of several African governments to provide enough financial compensation to sustain household income holds the possibility of leading to resistance against the social distancing measures if not social unrest and starvation.

Lastly, health education and health promotion efforts in Africa are also a challenge. In an opinion poll on the public perceptions of COVID-19 in Nigeria, 26% of respondents believed that they were immune to COVID-19.<sup>7</sup> Reasons given for this perceived invincibility include, being a “child of God,” possession of strong genes, drinking of strong herbs, and hot weather. Nigeria is particularly vulnerable to disinformation due to low literacy levels, the rise of evangelical Christianity with large congregations in close quarters, the promotion of miracle cures, and the rise of Islamic fundamentalism (“Boko Haram”) in Northern Nigeria. Changing COVID-19 perceptions in SSA will require a persistent effort at re-education.

## OPPORTUNITIES AND THE WAY FORWARD

It is a mistake to assume that Africa will be spared from the COVID-19 pandemic. There is no definitive data on environmental factors or genetic disposition to suggest this. How much of a

toll will be taken depends on public and governmental support for the health care workforce and infrastructure that is already substantially under resourced. Past experiences such as the 2014 Ebola epidemic in West Africa have enabled the public health infrastructure to mature and produce stronger surveillance systems with local health departments better at contact tracing and creating increased lab capacity for testing.<sup>8</sup>

The African Center for Disease Control is playing a leading role in coordinating efforts on the continent particularly in the area of COVID-19 testing by supporting African countries with one million test kits, as part of the *Partnership to Accelerate COVID-19 Testing* (PACT) program.<sup>9</sup> The World Bank has also established a dedicated fast-track mechanism for the COVID-19 response and earmarked \$1.9 billion available to 25 African countries, with plans to deploy \$160 billion over the next 15 months.<sup>10</sup>

## CONCLUSION

In conclusion, it is hoped that these efforts and more will play a role in enabling SSA countries to overcome the obstacles they will likely face. SSA countries will need the help of high-income nations via both tangible resources and lessons learned in fighting this pandemic. As COVID-19 disease incidence and severity are age dependent, perhaps one saving grace is that the median age in Africa, 20 years, is approximately half of that of the United States and Europe. With youth also comes hope and the yearning for a brighter future for the continent.

### CONFLICT OF INTEREST

No conflicts of interest to report.

### AUTHOR CONTRIBUTIONS

Research concept and design: Mezue, Nsofor, Anya, Nunura, E. Madu; Acquisition of data: Mezue, Edwards, Nsofor, Anya; Data analysis and interpretation: Mezue, Edwards, Nsofor, Goha, Anya, K. Madu, Nunura, Gaulton; Manuscript draft: Mezue, Edwards, Nsofor, Goha, Anya, K. Madu, Baugh, Nunura, Gaulton, E. Madu; Administrative: Mezue, Edwards, Goha, Anya, K. Madu, Baugh, Nunura, Gaulton, E. Madu; Supervision: Anya, Baugh, Gaulton, E. Madu

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