Tackling COVID-19 in Africa: A Focus on Nigeria's Peculiarities and Challenges

Oritoke Modupe Aluko,1,2,3,* Saheed Adesile Lawal,1 Martin-Mary Falana,2 Ayotunde Samuel Adeagbo,1 and Omamuyovwi Meashack Ijomone3

1Department of Physiology, School of Health and Health Technology, Federal University of Technology, Akure P.M.B. 704, Ondo State, Nigeria
2Kids & Teens Resource Centre, Akure, Ondo State, Nigeria
3The Neuro- Lab, School of Health and Health Technology, Federal University of Technology, Akure P.M.B. 704, Ondo State, Nigeria
*Correspondence: omaluko@futa.edu.ng (O.M.A.); oritokealuko@gmail.com (O.M.A.)
Received: October 6, 2020; Accepted: January 3, 2021; Published Online: January 4, 2021; https://doi.org/10.1016/j.xinn.2021.100078
© 2021 The Authors. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).
Citation: Aluko O.M., Lawal S.A., Falana M.-M., et al. (2021). Tackling COVID-19 in Africa: A Focus on Nigeria’s Peculiarities and Challenges. The Innovation 2(1), 100078.

Coronavirus disease (COVID-19) is an infectious disease caused by a novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first reported outbreak of COVID-19 was in China in December 2019. The World Health Organization (WHO) declared the outbreak a Public Health Emergency of International concern in January 2020 and a pandemic in March 2020. Italy confirmed its first cases in January 2020, and Nigeria in February 2020. By July 2020, more than 15.3 million COVID-19 cases were reported in more than 188 countries, resulting in over 630,000 deaths; although more than 9.3 million people recovered.1

The novel SARS-CoV-2 primarily targets the respiratory system, resulting in severe acute respiratory symptoms as its hallmark. It is primarily transmitted from symptomatic people to individuals in close contact through respiratory droplets, or direct contact with contaminated objects/surfaces. There are mild to moderate respiratory symptoms in most COVID-19-infected people who recover without the need for special therapy. However, several other cohorts, particularly older people and those with underlying medical challenges, are more likely to develop serious illness.2 Treatments, such as dexamethasone, chloroquine/hydroxychloroquine, remdesivir, and convalescent plasma, have been deployed, although with controversial outcomes.

Globally, several containment strategies and mitigation measures are being used to prevent the spread of COVID-19, although each country may vary depending on its health demands and peculiarities. These measures include total or partial lockdown, effective personal and public hygiene, use of nose masks, protecting the most vulnerable, isolating infected or suspected-infected persons, and testing. In Nigeria, several precautions and interventions have been provided by WHO and the Nigeria Center for Disease Control to contain the pandemic.2,3

As of July 23, 2020, Africa has recorded 770,175 confirmed cases, including 435,142 (52%) recoveries and 16,446 (2.1%) deaths. South Africa and Western Sahara recorded the highest and lowest confirmed cases with 394,948 and 10, respectively. Mauritius and Namibia recorded the highest (96.5%) and lowest (2.8%) percentage recoveries. Aside from Western Sahara, with very few cases, Chad recorded the highest percentage of deaths (8.4%), while Uganda, Eritrea, and Seychelles recorded no deaths.3 The regional distribution summaries of COVID-19 cases in Africa are shown in Figure 1A, and the top 10 worst-hit African countries are depicted in Figure 1B.

Nigeria, Africa’s most populous and largest economy, and the third most-hit African country by COVID-19, is a good representative of the African situation. Nigeria has some peculiarities and challenges that are also common to some other African countries, which have negatively affected strategies toward containment and combating the pandemic.

Health Sector

The poor Nigerian health sector posed a great disadvantage in combating the pandemic. There were, and are still, insufficient health facilities, isolation centers, and daily testing capacities to manage those infected with the virus.3 These disadvantages proved Nigeria was not prepared to manage a pandemic. Over time, the government took some emergency decisions to combat the virus, which included building more isolation centers and expanding the testing capacity. Yet, these measures have been grossly inadequate.

Political Factors

Political leaders have played certain negative roles in influencing insufficient health facilities and the poor disbursement of palliatives. Thus, out of

Figure 1. Summary of COVID-19 Cases in Africa (A) Regional distribution in Africa; (B) Top 10 worst-hit countries. Data are available from the COVID-19 Dashboard by the Center for Systems Science and Engineering at John Hopkins University, as of July 20, 2020. (https://allafrica.com/coronavirus).
hunger and the necessities of life, citizens made no sense of the lockdown rules. Leaving their homes and mingling with other people without safety precautions aided the fast spread of the virus and, consequently, greater difficulty in containing it.

**Economic Sustainability**
The fear of economic decline and loss of sources of income forced people to disobey the safety rules and regulations required by the government. People left their homes to survive, claiming that more people were dying of hunger due to the lockdown than of COVID-19.

**Nonchalant Attitudes of Individuals**
Some individuals disregarded the safety rules out of selfish interest, thereby indirectly increasing the incidence of the virus. They failed to consider the fact that both the government and individuals have roles to play in combating the virus.

**Cultural Issues**
Under-reporting of COVID-19 cases exists due to fears of stigmatization within the community, which is quite a normal trend with Africans, due to their belief system.

**Living Conditions**
Most African homes are susceptible to increased spread and death from COVID-19 because of the large sizes of households. Based on traditions and poor standard of living, several family members live in the same room resulting in more physical contact thereby increasing the risk of transmission and death from COVID-19.

Currently, a lot of countries are still in crisis mode, doing what they can to control the COVID-19 outbreaks through measures such as case detection and isolation, social distancing, safety measures, and treating hospitalized patients. After the crisis, the following points could serve as insights toward the improvement and modernization of public health systems to prevent a resurgence and combat future pandemics.

**Strengthening the Healthcare System**
This would ensure resilient health systems via the supply of health facilities, establishing comprehensive surveillance systems, training the health workforce, and strengthening the primary and community health care systems.

**Responsible Health Policies**
These could achieve a lot in defining a vision for the future which in turn would help to outline priorities, expected roles for people, and build consensus ahead of future pandemics.

**Intensified Regional and Global Cooperation**
This has been proven to improve surveillance, emergency response, and prevention of infectious diseases, which are required for not only individual nation’s health systems but for global functioning.

**Opportunities for Research into Africa’s Vast Herbal Resources**
Nigeria, as with other African countries, has vast resources of herbal remedies and is guilty of under-exploiting its strengths. Adequate financial, infrastructural, and technical support from the government, industry, and companies is required to maximize the vast human and material resources available on the continent. This includes research into the management and treatment of infectious diseases via herbal, alternative, and complementary medicine.

In conclusion, African countries are faced with challenges in combating COVID-19 that make it difficult for them to contain the virus. Despite the strategies used in combating the virus, the challenges have worsened because of the increasing number of cases. Recently, there has been a high recovery in most countries as a result of the emergency response taken. Therefore, the better prepared a country is, the better the chances of fighting a pandemic.

**REFERENCES**
1. Worldometer (2020). COVID-19 pandemic. https://www.worldometers.info/coronavirus.
2. WHO (2020). Coronavirus. https://www.who.int/health-topics/coronavirus.
3. NCDC (2020). COVID-19 NIGERIA. https://covid19.ncdc.gov.ng/.
4. All Africa. COVID-19 Cases in Africa. https://allafrica.com/coronavirus/#covid19-map.
5. Punchng (2020). COVID-19 exposes Nigeria’s wobbling healthcare system. https://healthwise.punchng.com/covid-19-exposes-nigerias-wobbling-healthcare-system/.

**ACKNOWLEDGMENTS**
The authors have no acknowledgment.

**AUTHOR CONTRIBUTIONS**
O.M.A. and O.M.I. conceived the idea. O.M.A. and S.A.L. wrote the first draft. M.-M.F., A.S.A., and O.M.I. critically revised the content. All authors gave final approval of the version to be submitted and any revised version.

**DECLARATION OF INTERESTS**
The authors declare no competing interests.