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Implications of COVID-19 on the Healthcare Infrastructural Development in Nigeria

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Dear editor,

COVID-19 has further revealed the obvious infrastructural deficit and incompetency in healthcare systems of low- and middle-income countries like Nigeria. Even in developed countries, like the United States of America, healthcare systems are not spared by the overwhelming impacts of COVID-19 cases on their infrastructures. Public health infrastructure includes three key components required to plan, deliver, and evaluate public health services. These components are an adequate qualified work-force, reliable data and information systems, and capable and coordinated agencies (1). Before the COVID-19 pandemic, the health infrastructures and services in Nigeria were poor and inadequate despite the public health challenges in the country, like child and maternal mortality, malnutrition, and deaths from non-communicable diseases, among others. Nigeria, like other developing countries, has continued to suffer from small budgetary allocation for health, mismanagement of funds, and rural-urban disparity in the few existing healthcare infrastructures (2). This article aimed to highlight the COVID-19 pandemic effects on healthcare infrastructural development in Nigeria.

COVID-19 Impacts on the Healthcare Infrastructure: Since the record of the COVID-19 index case in Nigeria, the National Centre for Disease Control (NCDC) has been working to improve diagnostic capacities, contact tracing, and early testing to curtail the virus spread. Nigeria was rated above many of its African counterparts regarding epidemic preparedness with an index of 38.9% (3). However, its capacity to manage swiftly local and community transmission has been stated to be of doubt. The alarming increase in the number of COVID-19 cases recorded daily overwhelmed the front line healthcare workers, diagnostic capacities, and management facilities at some point. Moreover, there have been several reports about the limited supplies of personal protective equipment and ventilators needed to combat COVID-19, which have further exposed healthcare workers to the virus (3).

Although COVID-19 negatively impacted the healthcare system in Nigeria, there had been some notable infrastructural developments brought about by the COVID-19 pandemic.

Firstly, the healthcare system gained significantly higher attention from the government and international organizations as a result of the COVID-19 pandemic compared to the pre-COVID-19 period. The country has experienced a surge in healthcare financing, prompt agreement to demands, and increased the number of ventilators and some other machines, molecular laboratories, and bed spaces in hospitals. Before the COVID-19 pandemic, Nigeria could only boost less than 500 ventilators in a good working condition to manage severe COVID-19 cases (4). However, the United States of America donated 200 new ventilators to help Nigeria in managing COVID-19 patients, which will play a major role in infrastructural development for managing patients requiring intensive care, even after the COVID-19 pandemic (5). Newly constructed isolation centers in the country are world-class and well equipped with an adequate number of bed spaces and less overcrowding. Besides, some of the already existing health facilities were also renovated and equipped. As the number of active cases in the country reduces, many of these empty isolation centers are being closed and, therefore, may be converted to new primary healthcare centers, specialist hospitals, and maternity clinics, among others. Hence, the number of bed spaces increases in the country, improving the

healthcare delivery quality in these standard facilities. At the time when Nigeria recorded its index case, there were only four molecular laboratories capable of testing for COVID-19. However, within few months after the index case in Nigeria, there was a rapid surge in the number of molecular laboratories all over the country, and currently, there are above 60 public laboratories capable of conducting COVID-19 PCR testing in Nigeria (6). Many of these newly constructed diagnostic centers are well equipped with sophisticated diagnostic laboratory equipment. These facilities are used for COVID-19 diagnosis and other diseases. The COVID-19 pandemic also facilitated the procurement of well-equipped ambulances and the recruitment of skilled drivers and personnel to convey individuals with COVID-19 symptoms.

Besides, 100 billion naira credit intervention was undertaken by the Central Bank of Nigeria to support local pharmaceutical companies and other health-related stores to upscale in order to meet the increasing demand for medical facilities and services due to the COVID-19 pandemic (7). This huge sum provides ingenious businesses in the health value chain with a rare opportunity to expand and improve the quality of health products and services in the country, even after the COVID-19 pandemic. Furthermore, the unprecedented COVID-19 pandemic has put a strain on the country's health and economy due to the closure of businesses and lockdown regulations within and outside the country. An 500 billion naira COVID-19 Intervention Fund was paid, amounting to about 4.7% of the 2020 national budget for upgrading health facilities, supporting social interventions, and other expenditures as a result of the COVID-19 and its policies (8). This budgetary cut increases financial constraints on other sectors, including the salaries of health workers. Besides, the diversion of attention and resources from all other public health challenges as a result of the COVID-19 pandemic may impede various infrastructural development to address these public health concerns. For example, the lockdown has affected the vaccination programs for pregnant women and children and also antiretroviral therapy for HIV/AIDs patients.

The Nigerian government needs to maintain the momentum in health infrastructural development, even after the COVID-19 pandemic. Budgetary allocation for health should be increased to meet the 15% minimum agreed upon in the Abuja Declaration. Besides, the ministry of health should prioritize maintenance of newly constructed infrastructures and procured equipment to serve a long-term purpose. Also, the government should prosecute any official guilty of mismanagement of health funds and other corrupt practices in the health sector. The government should also improve the working environment and welfares of health workers to reduce brain drain in the health sector. Lastly, partnership with international organizations and medical institutions can foster infrastructural development of the health sector in the country.

The unprecedented COVID-19 pandemic exposed Nigeria's comatose and collapsed healthcare system and inadequate infrastructures, although healthcare systems are not spared in developed countries. However, the COVID-19 pandemic also served as a blessing in disguise by facilitating healthcare infrastructural development through fund allocations by the government and international organizations.

Footnotes

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References

1. Office of disease prevention and health promotion 2020. *Public health infrastructure*. 2020, [cited 16 November 2020]. Available from: https://www.healthypeople.gov/2020/topics-objectives/topic/public-health-infrastructure.
2. Edeme RK, Emecheta C, Omeje MO. Public health expenditure and health outcomes in Nigeria. *Am J Biomed Sc*. 2017;**5**(5):96. doi: 10.11648/j.ajbls.20170505.13.
3. Ajisegiri WS, Odusanya OO, Joshi R. COVID-19 outbreak situation in Nigeria and the need for effective engagement of community health workers for epidemic response. *Global Biosecurity*. 2020;**1**(4). doi: 10.31646/gbio.69.
4. World Health Organization. *Expanding COVID-19 tests in Africa's most populous nation*. Africa: WHO; 2020, [cited 4 November 2020]. Available from: www.afro.who.int/news/expanding-covid-19-tests-africas-most-populous-nation.
5. Ezeamalu B and Agency Report. *Premium Times*. 2020. Available from: www.premiumtimesng.com/news/top-news/408160-u-s-donates-200-ventilators-to-nigeria.
6. Onwuzoo A. *Lagos has 8 isolation centres with 547 bed capacity*. [cited 4 November 2020]. Available from: www.healthwise.punchng.com/lagos-has-8-isolation-centres-547-bed-capacity-commissioner.
7. Central Bank of Nigeria. *Circular to deposit money banks and the general public on: Guidelines for the operation of the n100 billion credit support for the healthcare sector*. Central Bank of Nigeria; 2020, [cited 25 March 2020]. Available from: https://www.cbn.gov.ng/Out/2020/FPRD/healthcareintervention.
8. Ejiogu A, Okechukwu O, Ejiogu C. Nigerian budgetary response to the COVID-19 pandemic and its shrinking fiscal space: Financial sustainability, employment, social inequality and business implications. *J Public Budg Account Financial Manag*. 2020;**32**(5):919–28. doi: 10.1108/jpbafm-07-2020-0101.