

Rising cholera cases: Harnessing the momentum of COVID-19 to strengthen Nigeria's health systems

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Abstract

Recently, there has been a surge in cholera cases in Nigeria. With the exhausting health resources and the overwhelming attention towards COVID-19, Nigeria is in danger of worsening the epidemiological profile of cholera in the country. Thus, it is pertinent to address the surge to prevent further weakening of the country's health system. In this paper, we, therefore, explore the various interrelated factors accounting for the surge in Nigeria. It is therefore suggested that multifaceted public health strategies be employed that leverage the current level of disease preparedness and response capacities to the COVID-19 pandemic to reduce the impacts of cholera. These measures will not only help in strengthening the country's health system but also enhance the achievement of the relevant strategies toward eradicating cholera.

KEYWORDS

cholera, COVID-19, epidemiology, health systems strengthening, pandemic

1 | BODY

The present focus of various public health efforts in the last one year has been primarily on the COVID-19 pandemic, while other disease conditions are slowly growing and becoming a threat, particularly, Low and Middle-income countries. Although Nigeria occupies a strategic position in the African continents, it is greatly underserved in the healthcare sphere. The country's health system that battles this pandemic is already overwhelmed owing to the lack of efficient healthcare service delivery, especially in the hard-to-reach areas.¹ Although the country is winning the war against the COVID-19 pandemic,² channeling the limited health resources to combat COVID-19 worth commending and has proved effective indeed. However, the exhaustive nature of the limited resources and the intense public health efforts toward COVID-19 might pave the way for cholera to rise more thereby, impacting the epidemiological profile of cholera in Nigeria. Recently, cholera, an acute diarrhoeal infection caused by eating or drinking food or water that is contaminated with the bacterium *Vibrio cholerae*, has been reported to be on the increase in a number of the country. The constantly reported cases, however, necessitate immediate public health efforts to nip it in the bud. Although in 2020, a huge capacity of health resources was allocated to manage and treat COVID-19 cases, there has been some setback in the management of other diseases including Cholera.

Cholera is a disease that affects the poor and most vulnerable people. Various factors however account for cholera transmission among which are poor living conditions, lack of potable water, sanitation, and hygiene (WASH) services.³

In Nigeria, cholera is an endemic disease that occurs almost annually during the rainy season particularly, in areas with poor sanitation. Historically, more frequent cases have been reported in the past with a high case fatality rate. The Nigeria Centre for Disease Control (NCDC) reported 42,366 suspected cases with 830 deaths at a case fatality of 1.95% from 20 out of the 36 states from January 2018 to October 2018 alone.⁴ From the beginning of this year till 22 May 2021 (Epidemiological Week 1- 21) a total of 5475 suspected cases including 179 deaths at a case fatality rate of 3.3% have been reported from nine states; Benue, Delta, Zamfara, Bomber, Bayelsa, Bauchi, Kofi, Sokoto and Nasarawa.⁵ Shockingly, as of the same week - 21, there were about 616 suspected cases of cholera reported from 29 local government areas (LGAs) in just four states -, Bauchi - 90, Kano - 310, Kwara - 43, and Plateau - 173, 30 confirmed cases, and 18 deaths.

Consequently, while the COVID-19 pandemic has hindered access to humanitarian aid, it has also resulted in increasing pressure on the already weakened health systems in Nigeria, being among the cholera endemic countries. These and lack of efficient human capacity and supplies may further weaken the health systems in the face of other outbreaks.⁶ Besides, cholera in Nigeria has been reported to be linked with the ongoing armed conflicts in some zones in the country, rapid urbanization, increasing population growth, traditional and religious beliefs.^{7,8} These factors if not properly addressed may further weaken the country's health system; a situation that can impede the progress already recorded in the battle against other diseases, including COVID-19 and Cholera.

Although the COVID-19 pandemic has increased the awareness of the enormous benefits of vaccines, the present surge of cholera cases can, however, be attributable to a disruption in the delivery of vaccination programs including cholera vaccines coupled with the already existing vaccine hesitancy in the country.⁹ It was reported that in 2013, the World Health Organization (WHO) created a global stockpile of two different brands of Oral Cholera Vaccines (OVC): Euvichol and Shanchol.¹⁰ Conversely, a total of 99 countries reported the suspension of immunization campaigns including OVCs on 20 May 2020.¹¹ With such disruption of immunization programs -including cholera vaccination-around the world,¹² in Nigeria especially, millions of lives could be said to be at risk of various vaccine-preventable diseases.

Moreover, the COVID-19 pandemic has also proven important in highlighting the significance of personal hygiene practices such as handwashing with soap under a running tap, and the use of alcohol-based hand sanitizers - combat waterborne diseases like cholera as well as other infectious diseases. A study to show the level of compliance to COVID-19 precautionary measures in Sub-saharan African shows that people complied with hand hygiene.¹³ Nevertheless, another study in Anambra State, Nigeria however, revealed that many people hardly use hand sanitizers

among the respondents sampled, as they complain of the high cost of most sanitizers.¹⁴ It is therefore pertinent that personal hygiene materials such as alcohol-based hand sanitizers and handwashing soap be made available perhaps, at a subsidized rate. The presence and availability of proper and sustainable WASH products will not only enhance the reduction in transmitting COVID-19 but will also have a secondary impact on potential disease outbreaks of cholera and other waterborne diseases especially in the rural communities where poor populations predominate.

The present situation is quite alarming because the poor living conditions of those in the rural communities, the lack of WASH services, and the ongoing armed conflicts in some parts of the country can negatively impact the effort to detect and contain the disease. While the shift in focus is to contain COVID-19, the negative impact of the pandemic on the disruption of cholera vaccination and other vaccine supply chain programs can result in elevated mortality rates, greater complications as well as an increased burden of vaccine-preventable diseases, such as cholera. Thereby, dragging the country down the ladder in her efforts to achieve the sustainable development goal 3 (good health and well-being) of the United Nations by 2030.

2 | RECOMMENDATIONS

To address the present situation, a multifaceted approach that entails an effective and efficient disease surveillance system, provision of WASH services as well as regular cholera vaccination program in the country, would go a long way in addressing the menace. Additionally, it is obvious the role disease preparedness and early response can play in containing the outbreak of infectious diseases like cholera. In the face of the current high level of disease preparedness capacities and surveillance system. The government through the Nigeria Centre for Disease Control (NCDC) should ensure Laboratory capacities are improved upon with necessary human and material resources to promptly test and detect strains of cholera.

Furthermore, the government should put necessary policies in place that prioritize alleviating the standard of living of the people through effective collaboration with intergovernmental organizations. This will ensure that projects that constitute a sustainable solution to infection control are carried out. This may include projects on the provision of sustainable WASH services in the rural areas through the provision of good and quality water supply, construction of sufficient latrines with proper sewage systems together with the distribution of enough hygiene kits to promote personal hygiene practices. The nongovernmental organizations (NGO), and civil society groups should also engage in community sensitization as well as awareness programs to better inform the people to promptly access the nearby health facilities in case of any suspected case of cholera to avoid community chain transmission.

Regarding the ongoing conflict in some parts of Nigeria and the reported cases of cholera therein, it has been reported in several studies that the bonds that unite populations across diversities may be restored through various healthcare delivery methods.¹⁵ Also, another study suggests that health initiatives, that is, health programs that focus on improving the population-level health outcomes and concurrently heightened the peace and security of the population, have been successfully used to achieve twin objectives of both peace and quality health outcomes.¹⁶ It is therefore recommended to restore peace as well as to strengthen the country's health system in responding to the cholera endemic particularly in the armed-conflict zones, community-based health interventions should be promoted. This should be geared towards promoting awareness and advocacy on cholera and its recommended preventive measures through the gatekeeper to the community - traditional rulers, religious leaders, ward development committee, and youth-led groups. The Nigeria government should make policies to allow subsequent initiatives in the future to ensure sustainability. The various health initiatives will help strengthen the social fabric in the zones and promote health.

Moreover, the government should make concerted efforts by soliciting support from intergovernmental health agency like the World Health Organization (WHO) and the United Nations International Children's Emergency Fund (UNICEF) for strengthening the delivery of OVCs to the country's health supply chain system. This will help to fill the vacuum already created by the COVID-19 pandemic on vaccine supply. In the delivery of OVCs however, the federal

ministry of health should as a matter of urgency instigate an extensive cholera vaccination across the country. The overall experience in the rollout of COVID-19 vaccines can be leveraged to overcome the hurdles of Oral Cholera Vaccine (OVC) delivery to cholera-endemic zones in Nigeria. The OVCs can be delivered alongside the COVID-19 vaccine in the same cold chain as they are both given in two doses in emergency settings with limited supply. This has the potential of improving overall coverage for the two vaccines and helps check vaccine hesitancy. Thus reducing or even ending the risk of cholera.

Conclusively, the present epidemiological status of cholera in Nigeria must be checked with multifaceted health responses involving appropriate stakeholders from both within and outside the country. The efforts should focus on improving the various public health strategies already in operation to contain the COVID-19 pandemic. These include the provision of appropriate early and more reliable diagnosis, WASH services, and hygiene practices through health initiatives. Increasing the health workforce and training of existing health professionals in infections, prevention, and control of the disease while also educating the public on sanitation and hygiene practices. Strengthening the health supply chain system to ensure Oral Cholera Vaccines (OVC) security for cholera vaccination across the country. With the above strategies, Nigeria can achieve a 90% reduction in cholera death by 2030 as contained in the Global Task Force on Cholera.

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CONFLICT OF INTEREST

The authors declared no competing interests.

ETHICS STATEMENT

This material is the authors' own original work, which has not been previously published and not currently being considered for publication elsewhere. The paper reflects the authors' own research and analysis in a truthful and complete manner. The paper properly credits the meaningful contribution of co-authors and co-researchers. The results are appropriately placed in the context of prior and existing research. All sources used are properly disclosed (correct citation). All authors have been personally and actively involved in substantial work leading to the paper, and will take public responsibility for its content.

AUTHOR CONTRIBUTIONS

Onyinyechi Patience Obidiro, Rasaq Kayode Oladapo, Afeez Babatunde Oyetola, Adekunle Olajide, and Eze Osuagwu-Nwogu conceptualized and drafted the first version of this article. Olajide Mariam Olaitan, Chinonso Ngokere, Igbalajobi Monisola, Bakare Ibraheem and Abiola Afolayan, contributed to subsequent drafts. All authors read, revised the drafts, and approved the final manuscript.

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