



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



## Letter to the editor

## Dual tension as Nigeria battles cholera during the COVID-19 pandemic



## ARTICLE INFO

## Keywords

Nigeria  
Cholera  
COVID-19

The year 2021 has been challenging for Nigeria's health system. The country has faced the burden of double diseases-cholera and the COVID-19 pandemic. Like most countries worldwide, Nigeria has been battling to rebuild its economy and public health system to contain the threat of the third wave of the fatal COVID-19 pandemic. However, health officials in the country were shocked by the Cholera resurgence.<sup>1</sup> Cholera is an acute diarrheal infection caused by the ingestion of food or water contaminated with toxin-producing strains of *Vibrio Cholerae*. This disease is highly prevalent in Africa and Asia. Its transmission results from poor sanitary conditions such as open defecation, unhygienic food handling and lack of safe drinking water.

Cholera is endemic in Nigeria and its outbreaks are not unusual.<sup>2</sup> Cases majorly occur in the Northern States because most of these States depend on hand-dug wells and contaminated rivers while many Nigerians still practice open defecation. This has further worsened the country's fragile health system, struggling with the third wave of the COVID-19 pandemic. As of October 17, 2021, a total of 93,362 suspected cholera cases, including 3,283 Cholera related deaths (CFR 3.5%) have been reported from 32 states and the Federal Capital Territory in 2021.<sup>3</sup> In addition to Cholera suspected cases reported, 50% are males and 50% are females. Like the global prevalence, the high rate of confirmed cases by Nigeria Centre of Disease Control (NCDC) was among the pediatric population, with 63.2% between 5 and 14 years. The NCDC also reported that there had been a gradual increase in the number of new cholera cases in Nigeria. Also, if the conditions of Internally Displaced Persons in the various camps across the country are considered; the statistics may worsen.<sup>4</sup> According to the Norwegian Refugee Council, the overcrowded camps coupled with the shortage of sanitation and hygiene facilities increase the spread of Cholera.

Obviously, the increasing cases of Cholera infections during the third wave of the COVID-19 pandemic could be troublesome for the country's fragile health care system. However, the Nigerian government swung into action to tackle the situation through the NCDC. The NCDC activated a multi-sectoral National Cholera Emergency Operations Centre (EOC) due to the rising cholera cases.<sup>5</sup> Therefore, the affected States are supported by the National EOC for a rapidly coordinated and effective response to the ongoing cholera outbreak.<sup>5</sup> This involves, amongst other activities, the deployment of National Rapid Response Teams (RRT) to support the response at the state level, medical and laboratory supplies

provision and risk communications scale-up.<sup>5</sup> Additionally, the resources allocated to curb Nigeria's COVID-19 pandemic are being used to strengthen the response to the cholera outbreak. Therefore, the National Surveillance System for cholera has been digitalized, laboratories and treatment centres have been established and health workers have been trained and prepared to face both Cholera and COVID-19.<sup>5</sup>

Hence, it is evident that the Cholera epidemic during the third wave of the COVID-19 pandemic in Nigeria has been a burden to the country's health system considering its fragile nature. Although the NCDC has put strategies to tackle the issue, the open defecations habits should be banned, especially in the Northern regions, and encourage clean defecation habits such as using pour-flush toilets. Also, the citizens should be sensitized to practicing good hygiene such as proper use of latrines, digging wells away from sewages and proper food handling. The National Food Drug Administration and Control should ensure that water and food sold to the public are safe and clean. Furthermore, Cholera prevention measures should also be given priority by integrating them into the COVID-19 prevention programs.

## Contributing authors

ShuaibuSaidu Musa and Don Eliseo Lucero-Prisno III conceived the idea. ShuaibuSaidu Musa, Dawa Gyeltshen, Emery Manirambona, Yusuf Hassan Wada, Abubakar Faizah Sani and Irfan Ullah assisted in writing and drafting the manuscript. Don Eliseo Lucero-Prisno III proofread the manuscript with important intellectual additions. All authors read and approved the final manuscript.

## Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## Ethical approval

Not required.

<https://doi.org/10.1016/j.cegh.2021.100913>

Received 8 November 2021; Accepted 15 November 2021

Available online 26 November 2021

2213-3984/© 2021 The Authors. Published by Elsevier B.V. on behalf of INDIACLEN. This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationship that could have appeared to influence the work reported in this paper.

## References

1. PUNCH news papers. Cholera exposes Nigeria's health woes, poor hygiene as epidemic hits FCT, 16 states. Available at; <https://punchng.com/-exposes-nigerias-health-woes-poor-hygiene-epidemic-hits-federal-capital-16-states/>. Accessed September 7, 2021.
2. AjokeOlutolaAdagbada, et al. Cholera epidemiology in Nigeria: an overview. Available at: <https://pubmed.ncbi.nlm.nih.gov/22937199/>. Accessed November 2, 2021.
3. NCDC. An update of cholera outbreak in Nigeria. Available at; <https://ncdc.gov.ng/diseases/sitreps/?cat=7&name=An%20update%20of%20Cholera%20outbreak%20in%20Nigeria>. Accessed November 3, 2021.
4. PUNCH News papers. Curbing spread of cholera amid COVID-19. Available at: <https://punchng.com/curbing-spread-of-cholera-amid-covid-19/>. Accessed September 2, 2021.
5. ReliefWeb NCDC Supports states to intensify cholera outbreak response. Available at. Accessed September 9, 2021.

Shuaibu Saidu Musa\*

Department of Nursing Sciences, Ahmadu Bello University Zaria, Nigeria  
Global Health Focus, Abuja, Nigeria

Dawa Gyeltshen  
Eusa Hospital, Ministry of Health, Wangdue Phodrang, Bhutan

Emery Manirambona  
Global Health Focus, Kigali, Rwanda

Yusuf Hassan Wada  
Faculty of Pharmaceutical Sciences, Usmanu Danfodiyo University, Sokoto,  
Nigeria

Abubakar Faizah Sani  
Department of Nursing Sciences, Usmanu Danfodiyo University Sokoto,  
Nigeria

Irfan Ullah  
Faculty of Medicine, Kabir Medical College, Gandhara University,  
Peshawar, Pakistan

Don Eliseo Lucero-Prisno III  
Department of Global Health and Development, London School of Hygiene  
and Tropical Medicine, London, United Kingdom

\* Corresponding author. Department of Nursing Sciences, Ahmadu Bello  
University, Zaria, Nigeria.  
E-mail address: [shuaibumusa2@gmail.com](mailto:shuaibumusa2@gmail.com) (S.S. Musa).