

Potential re-emergence of cholera in Brazil

Paulo Ricardo Martins-Filho^{a,*} and Cliomar Alves dos Santos^b

^aFederal University of Sergipe, Investigative Pathology Laboratory, Sergipe, Brazil

^bGovernment of Sergipe State, Central Laboratory of Public Health (LACEN/SE), Sergipe, Brazil

The recent identification of an autochthonous cholera case — the first in 18 years—brings attention to the potential re-emergence of the disease in Brazil. This marks a significant public health concern that underscores the need of interventions to improve access to clean water, sanitation facilities and hygiene behaviours, especially in vulnerable areas. This new case signals possible lapses in preventive measures and the urgent necessity to reinforce health infrastructure and surveillance systems.

Cholera, a highly contagious bacterial infection caused by *Vibrio cholerae*, poses a severe threat in regions lacking essential sanitation services. The disease primarily spreads through contaminated water, leading to severe watery diarrhoea, dehydration, and potentially fatal outcomes if not promptly treated. Despite its high fatality potential, timely and effective rehydration can significantly mitigate mortality risks.¹

Cholera has consistently been a major public health challenge, especially in developing nations with inadequate water and sanitation infrastructure. While Africa reports the majority of cholera cases,² recurrent outbreaks also affect the Americas, notably in Haiti and the Dominican Republic.³ The disease first appeared in Brazil in 1991, introduced through Peru, and affected primarily the Amazon region. From 1991 to 2001, Brazil recorded over 168,000 cases and 2000 deaths, predominantly in the Northeast.⁴ Following a period from 2006 during which only imported cases were reported, the recent case documented by the Brazilian Ministry of Health on 19 April 2024 represents a significant epidemiological event.⁵

The incident involving a 60-year-old man from Salvador, the capital of Bahia in Brazil's Northeast, highlights the potential resurgence of cholera in the country. The patient sought medical attention for abdominal discomfort and diarrhoea, with no history of recent travel or known contact with any cholera cases. Diagnostic tests, including stool culture and PCR, were conducted. The stool culture results were positive for *Vibrio cholerae*. Further, the PCR analysis confirmed the presence of toxigenic *Vibrio cholerae* O1, serotype Ogawa. This case is particularly concerning given the social and economic context of Salvador, a region

characterized by high rates of poverty, violence, and unemployment. These factors can exacerbate the transmission of the disease and complicate control efforts. Consequently, there is a pressing need for an immediate coordinated public health response, which should include enhanced surveillance, public education, and the strengthening of water, sanitation, and hygiene infrastructures.

According to a report by the World Health Organization, there has been a multi-country outbreak of cholera since January 2023, leading to its classification as a grade 3 emergency due to geographic expansion and resource shortages. This surge in cholera cases has been particularly pronounced in regions such as Africa, the Eastern Mediterranean, Central America and the Caribbean, Southeast Asia, and the Western Pacific, where factors such as poverty, ongoing conflicts, and climatic events predominantly contribute to exacerbating the spread of the disease.⁶ In response to these challenges, and to prevent a potential outbreak, Brazil must swiftly implement comprehensive public health strategies. These should include rigorous contact tracing, public awareness campaigns about hygiene practices, and rapid access to medical treatment for suspected cases. Long-term investments to improve water and sanitation systems are also critical to prevent the spread of cholera.^{7,8}

The recent case of cholera in Brazil is a stark reminder of the persistent threat posed by infectious diseases and the continuous need for vigilance and preparedness in public health strategies. As we face the possibility of cholera's re-emergence, it is imperative that public health authorities, in collaboration with global partners, reinforce efforts to protect public health and prevent future outbreaks.

Contributors

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Declaration of interests

We declare no competing interests.

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*Corresponding author. Universidade Federal de Sergipe, Hospital Universitário, Laboratório de Patologia Investigativa, Rua Cláudio Batista, s/n. Sanatório, Aracaju, Sergipe, CEP: 49060-100, Brazil.

E-mail addresses: prmartinsfh@gmail.com, profpaulomartins@academico.ufs.br (P.R. Martins-Filho).

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