RE-EMERGENCE OF DENGUE FEVER IN BANGLADESH: A Rising Global Public Health Concern

ABSTRACT

In Bangladesh, dengue fever—a virus spread by Aedes aegypti and Aedes albopictus mosquitoes—has resurfaced as one of the biggest public health issues. Since 2019, the nation has seen a dramatic rise in cases; the deadliest dengue epidemic in its history occurred in 2023, when the largest outbreak reported over 300,000 cases and over 1,600 fatalities. The concerning increase in dengue in Bangladesh is highlighted in this commentary, along with its worldwide ramifications and the pressing need for efficient surveillance, vector control and long-term healthcare plans.

INTRODUCTION

The dengue virus (DENV), a member of the Flaviviridae family, is the cause of dengue fever. High fever, intense headache, retroorbital pain, myalgia, arthralgia, rash and in extreme situations, shock syndrome and hemorrhagic fever are some of its symptoms [1]. Dengue is endemic in more than 120 countries worldwide; according to WHO estimates, 390 million cases occur each year, of which 96 million result in clinical manifestations [2].

Recurrent outbreaks have made Bangladesh a hotspot. Rapid urbanization, unplanned settlements, inadequate waste management and a favorable climate have all combined to create the perfect environment for the breeding of Aedes mosquitoes. Dengue became a national emergency in 2023 due to an unprecedented spike in cases, highlighting the disease's status as a growing global public health concern.

GLOBAL SCENARIO OF DENGUE INFECTION

Asia, Latin America and increasingly Africa are all affected by dengue. Southeast Asia borne the brunt of the world's record-breaking cases in 2023, according to the WHO [2,3]. The bulk of cases in Asia were reported from Bangladesh, India, Thailand and the Philippines (Figure 1).

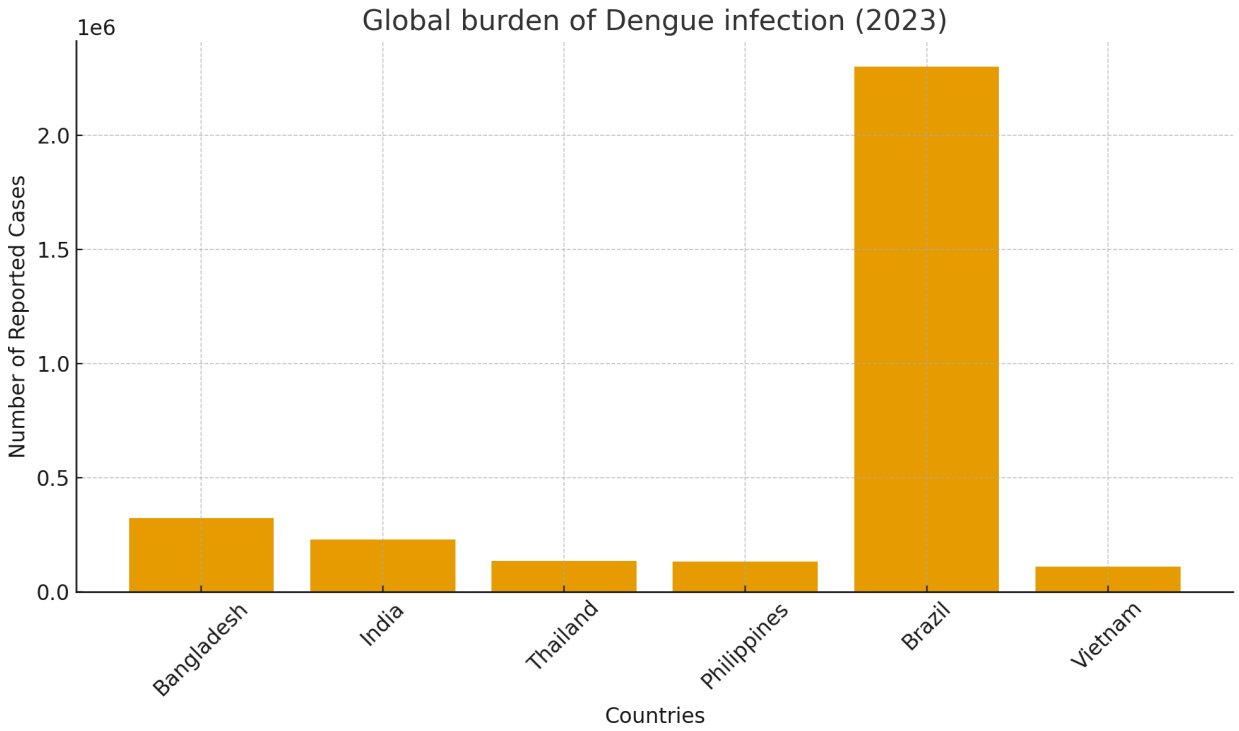

Figure 1 shows the dengue infection burden and distribution worldwide in 2023. information gathered from ECDC and WHO sources [2,3]. The number of confirmed cases is displayed on the Y-axis, while the X-axis represents nations with significant dengue outbreaks.

RE-EMERGENCE OF DENGUE IN BANGLADESH

In Bangladesh, the first dengue outbreak was documented in 2000, with over 5,500 cases and 93 fatalities [4]. Although there have been occasional outbreaks since then, the illness has recently returned with frightening vigor.

- With more than 100,000 confirmed cases, the nation reported its largest outbreak to date in 2019 [5].
- Seasonal outbreaks became more severe between 2021 and 2022, when monsoon-associated breeding occurred.
- The highest annual toll in Bangladesh's history was over 300,000 cases and over 1,600 fatalities nationwide in 2023 [6].

Urban areas with high population densities and inadequate drainage systems, like Dhaka and Chattogram, were disproportionately affected by the outbreak.

Table 1: Outbreaks of dengue in Bangladesh from 2000 to 2023.

TABLE: 1

Year	Reported Cases	Deaths	Major Notes
2000	5,521	93	First major outbreak
2019	101,354	179	Largest outbreak until 2019
2021	28,429	105	Severe post-monsoon surge
2022	62,423	281	Early and prolonged outbreak
2023	321,179	1,705	Deadliest outbreak in history

(Data sources: DGHS Bangladesh; WHO Dengue Situation Reports [4–6])

FUTURE RECOMMENDATIONS AND CONCLUSIONS

In order to stop dengue transmission, the 2023 outbreak emphasizes the critical need for cross-border cooperation, sustainable urban planning and integrated vector management. Morbidity and mortality in Bangladesh could be decreased by stepping up disease surveillance, guaranteeing early diagnosis, increasing intensive care unit capacity and hastening the rollout of dengue vaccines (like CYD-TDV and TAK-003).

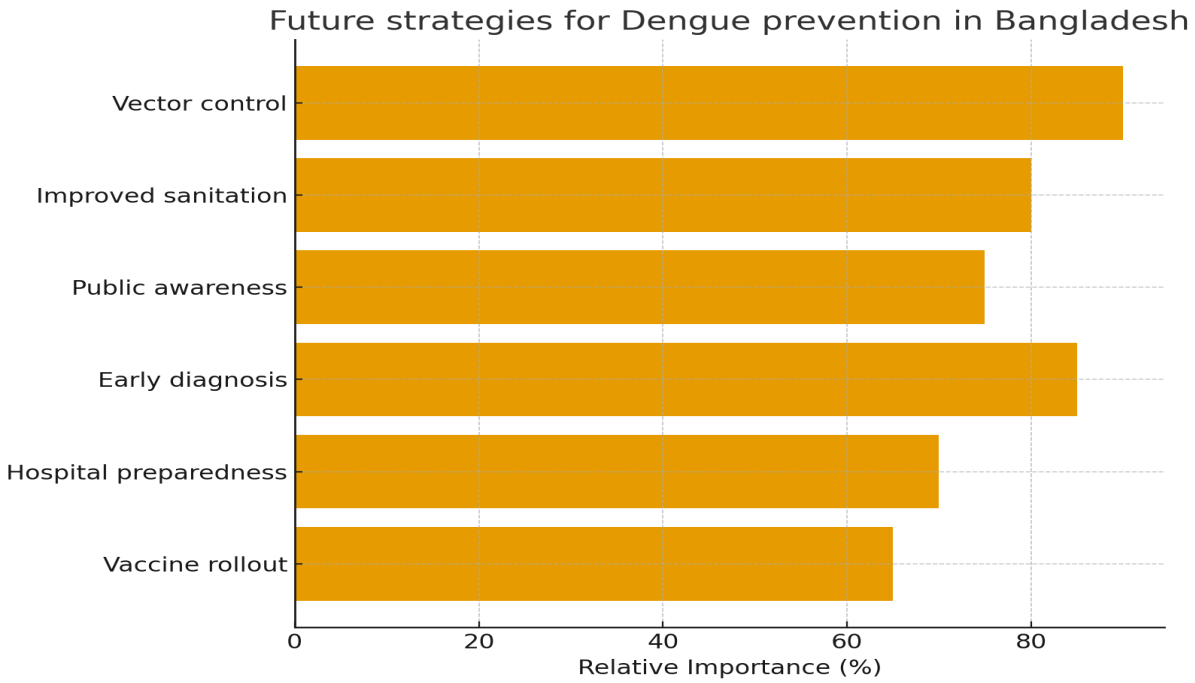

Figure 2: Future plans for Bangladesh's dengue prevention. Comprehensive measures such as vector control, better sanitation, the introduction of vaccines and public awareness campaigns are depicted in the figure.

Given the transboundary nature of vector-borne diseases, the resurgence of dengue in Bangladesh is not only a domestic issue but also a regional and international one. Bangladesh might experience frequent, widespread epidemics with serious socioeconomic repercussions if prompt, evidence-based interventions are not implemented.

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AUTHOR CONTRIBUTIONS

The study's concept, data collection and analysis, figure and table preparation, manuscript writing and final submission approval were all done by the single author.

CONFLICTS OF INTEREST

The author declares no conflicts of interest.

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