July 1, 2024

Prof Shui Shan Lee

Editor-in-Chief, International Journal of Infectious Diseases

**Subject: Manuscript on the largest Bangladesh dengue outbreak in 2023**

**Dear Prof Lee,**

Please find attached our manuscript “The 2023 Fatal Dengue Outbreak in Bangladesh Highlights a Paradigm Shift of Geographical Distribution of Cases” for consideration as an “Original article” in *IJID.*

In 2023, the world witnessed the first landmark of 6000 annual deaths due to dengue virus infection and Bangladesh recorded more than one-fourth of the total fatalities (n=1705). We worked with the Ministry of Health and Family Welfare of Bangladesh (Management Information System) on the dataset of 321,179 confirmed dengue cases and 1705 deaths to characterize the country's outbreak pattern and transmission dynamics.

In 2023, there were 1.3 times as many reported cases of dengue fever as there were in the previous 23 years, from 2000 to 2022 (321,179 vs. 244,246), and there were twice as many deaths (1705 vs. 849). Of the 1705 fatalities, 67.4% (n=1015) occurred within 24 hours of hospital admission, indicating the severity of the disease and/or late admission. We believe these findings need special attention from the authorities in Bangladesh, South/Southeast Asia, and other countries with similar economic status. This information will be also useful for WHO, CDC, ECDC, and other jurisdictions to modify/develop the guidelines for dengue infection.

In contrast to the idea of an urban disease, dengue poses a significant threat to rural communities in Bangladesh. The largest Muslim festival Eid-Al-Adha coincided with an epidemic that was ongoing in the Capital city, Dhaka. Many people (~15 million) left Dhaka and its surrounding cities to celebrate Eid-Al-Adha with their families in rural Bangladesh. This large movement probably played a role in spreading the DENV throughout the county. Our study showed the higher incidence and CFR of the district southern to the central capital city, Dhaka, and the incidence was associated with higher temperatures, urbanization, and humidity.

We have discussed the public health challenges for controlling future outbreaks of the dengue virus in Bangladesh. All authors reviewed the article and provided their consent for journal submission. We do not have any conflict of interest. This manuscript has not been published and is not under consideration for publication elsewhere.

Thank you for considering our submission.

**Kind regards,**

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