

Chinese Notifiable Infectious Diseases Surveillance Report

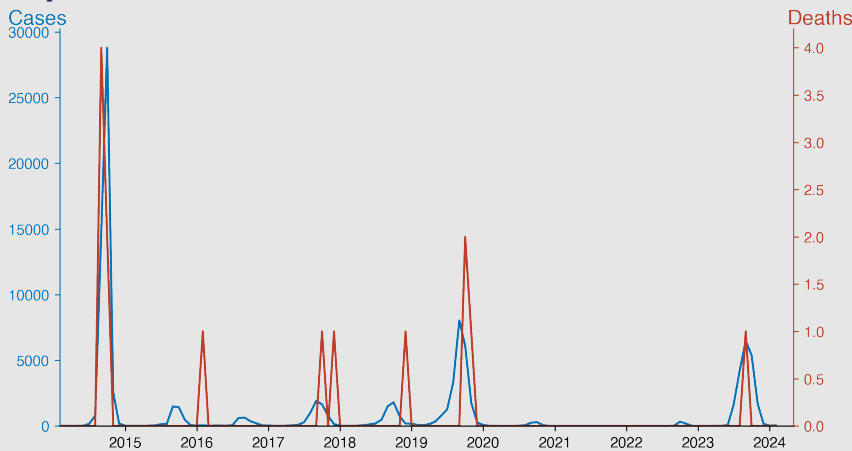
Dengue

February 2024

Introduction

Dengue is a mosquito-borne viral infection causing a flu-like illness that can occasionally develop into a potentially lethal complication called severe dengue. The dengue virus is transmitted by female mosquitoes mainly of the species *Aedes aegypti* and, to a lesser extent, *Ae. albopictus*. These mosquitoes also transmit chikungunya, yellow fever, and Zika infection. Dengue is widespread throughout the tropics, with local variations in risk influenced by rainfall, temperature, and unplanned rapid urbanization. There are four dengue viruses (DENV 1-4) that can cause dengue infection, and it is possible to be infected four times.

Temporal Trend



Highlights

- There's an apparent seasonality in Dengue Fever cases in mainland China with peaks occurring around August to October every year.
- Since 2020, there's been a significant decrease in Dengue cases throughout the year. However, there was a drastic surge in cases in the mid-2023, indicating a potential outbreak.
- The mortality rate of Dengue remains relatively low with few recorded deaths despite fluctuating case numbers, demonstrating effective medical response.
- The situation in February 2024 shows 42 cases and no deaths, indicating an overall control of the disease, in comparison with the previous year's spike in cases during this period.

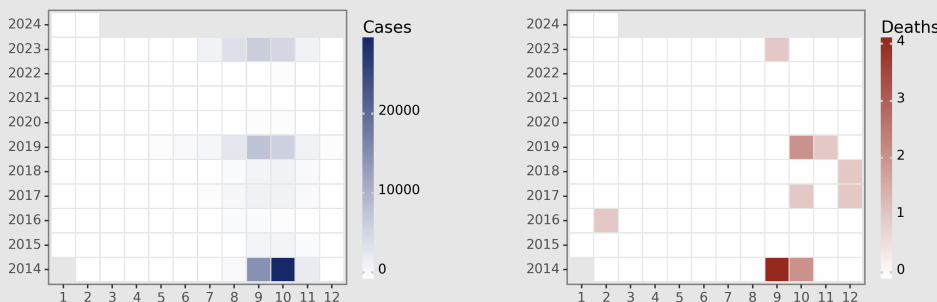
Cases Analysis

Dengue cases on Chinese mainland experience spikes during the late summer to autumn transition, specifically from August to October consistently throughout the years under review. The highest number of cases was reported in October 2014 with 28,796 cases. A fluctuating decline in number can be observed from 2014 through to 2020. The reported cases were lowest in 2021, however, a sudden rise can be seen again in July 2023, with 1,604 cases leading to a recurrent cycle of climbing cases during the last few months of the year, demonstrating a noticeable seasonal pattern.

Deaths Analysis

Dengue-associated mortality in Chinese mainland has been relatively low despite high incidence in certain years. The highest number of deaths occurred in 2014 with 6 fatalities, correlating with the extraordinary outbreak that year. The following years until 2019 saw occasional deaths, never exceeding two per month. Notably, from February 2020 onwards, only one death was reported through September 2023, indicating either effective clinical management, reporting discrepancies, or a change in virus virulence. The sharp decline in deaths despite some resurgence in cases suggests improved healthcare responses or underreporting.

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