Chinese Notifiable Infectious Diseases Surveillance Report

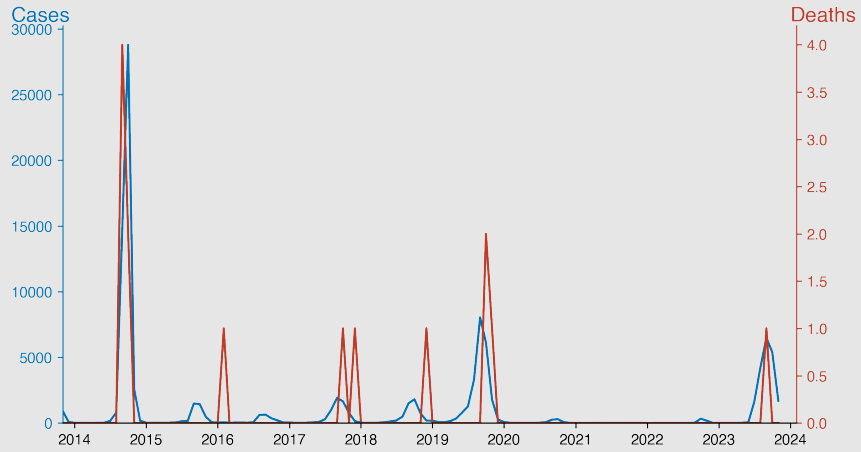
Dengue

November 2023

Introduction

Dengue is a mosquito-borne viral disease prevalent in tropical and subtropical regions around the world. It is caused by four closely related viruses, the Dengue viruses 1-4. There are two main types of the disease; dengue fever and dengue hemorrhagic fever. Dengue fever is a severe flu-like illness that affects older children and adults. Dengue hemorrhagic fever is a more severe form, causing abdominal pain, vomiting, and hemorrhagic complications. Aedes mosquitos, primarily Aedes aegypti, transmit the disease. There is currently no specific treatment for dengue, and prevention relies on controlling the mosquito vectors or interrupting human-vector contact.

Temporal Trend



Highlights

- Dengue cases in China peak annually between July and October, with a significant rise in July 2023 and a peak in September 2023.
- Mortality remains low despite increases in incidence; only one death reported in September 2023, indicating effective management of cases.
- Seasonal trends show high dengue activity during warm, rainier months, with a swift decline as the weather cools.
- The 2023 pattern suggests a moderate transmission year compared to the high incidence in 2014 and 2019, emphasizing continuous control measures.

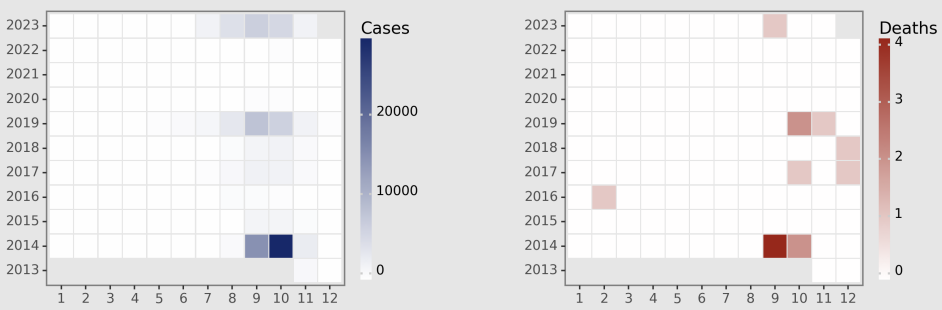
Cases Analysis

Dengue cases in Chinese mainland displayed seasonal peaks, typically between July and October, aligning with mosquito activity. The year 2014 observed the most significant outbreak, where September and October alone accounted for 43,555 cases. A sharp decline in cases is evident post-2014, with modest surges in 2015, 2017, 2019, and 2023. The data suggests an overall effective control, with dramatic reductions seen from 2020 to 2022, possibly due to intensified prevention measures or an impact of concurrent public health interventions for other diseases like COVID-19.

Deaths Analysis

Dengue-associated fatalities were rare, totaling 9 across the 2013-2023 period. The largest number of deaths occurred in 2014 during a major epidemic but remained low (6 deaths) relative to case numbers. The fatality rates were exceedingly low, even in years with thousands of cases such as 2019 and 2023, indicating effective clinical management. Occasional deaths in years with fewer cases (e.g., 2016, 2017, 2019) suggest isolated severe instances or possible reporting variances. The data reflects a generally low mortality risk from dengue in the region.

Distribution



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