Chinese Notifiable Infectious Diseases Surveillance Report

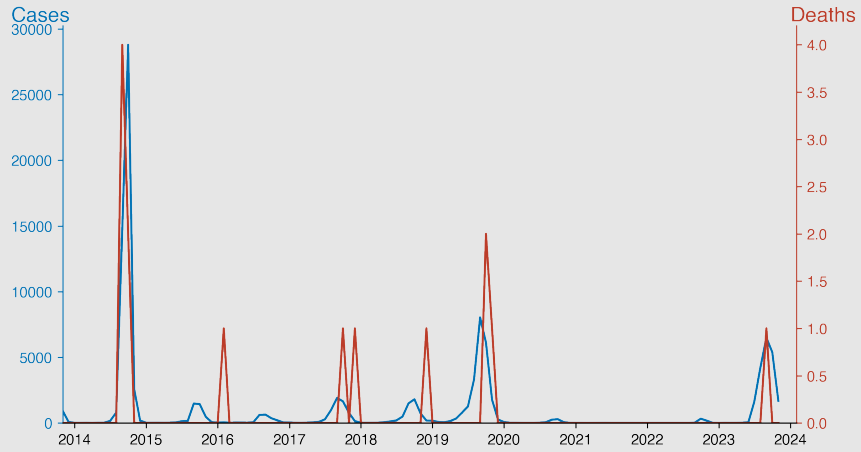
Dengue

November 2023

Introduction

Dengue is a mosquito-borne viral infection causing a severe flu-like illness and, sometimes causing a potentially lethal complication called severe dengue. The global prevalence of dengue has grown dramatically in recent decades. About half of the world's population is now at risk. Dengue is found in tropical and sub-tropical climates worldwide, mostly in urban and semi-urban areas. There are four distinct, but closely related, serotypes of the virus that cause dengue. Recovery from infection by one provides lifelong immunity against that particular serotype. However, cross-immunity to the other serotypes is partial and temporary.

Temporal Trend



Highlights

- Periodic fluctuations are observed, with peak case numbers typically occurring during the warmer months (July to October), suggesting a seasonal pattern of transmission.
- Since 2010, there has been a general upward trend in the number of cases, with particularly large outbreaks in 2014 and 2019.
- The number of deaths remains low compared to the total number of cases, indicating that while the virus is widespread, the case-fatality rate is low.
- The recent data from 2023 demonstrate a significant outbreak with 16,785 cases reported from July to November, but with only one death, reinforcing the maintained low case-fatality rate.

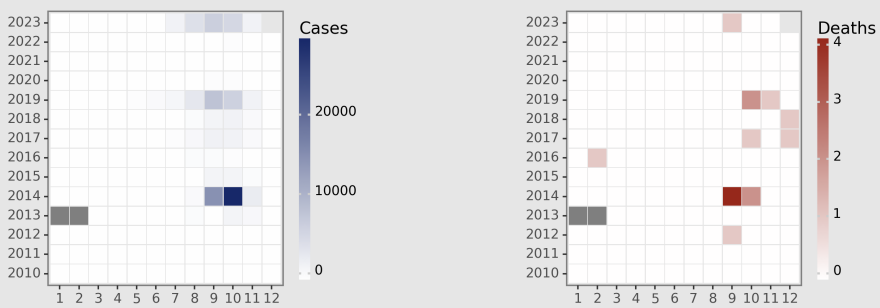
Cases Analysis

Dengue cases in the Chinese mainland presented seasonal peaks typically in the warmer months, with significant outbreaks observed in years such as 2013, 2014, and 2019. The largest monthly case count was recorded in October 2014 with 28,796 cases. A notable dip in cases began in 2020, coinciding with COVID-19 pandemic interventions, suggesting possible impacts on vector control or reporting practices. The upward trend in late summers, as seen in the visibly alarming rise in July and August 2023, emphasizes the importance of proactive vector surveillance and control measures during these high-risk periods.

Deaths Analysis

Dengue-related fatalities in the Chinese mainland were remarkably low despite high case numbers, reflecting effective clinical management and possibly low virulence strains. Deaths were sporadic, with a slight increase in mortality observed in September 2012, September 2014, October 2019, and December 2018. The sole death reported in September 2023 amidst an outbreak of over 6,000 cases further underscores the health system's capacity to manage severe dengue outcomes. Continuous improvements in healthcare, alongside public health strategies to reduce transmission, likely contributed to the low mortality rates.

Distribution



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Version: 2024-01-04 (UTC+)

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