

Chinese Notifiable Infectious Diseases Surveillance Report

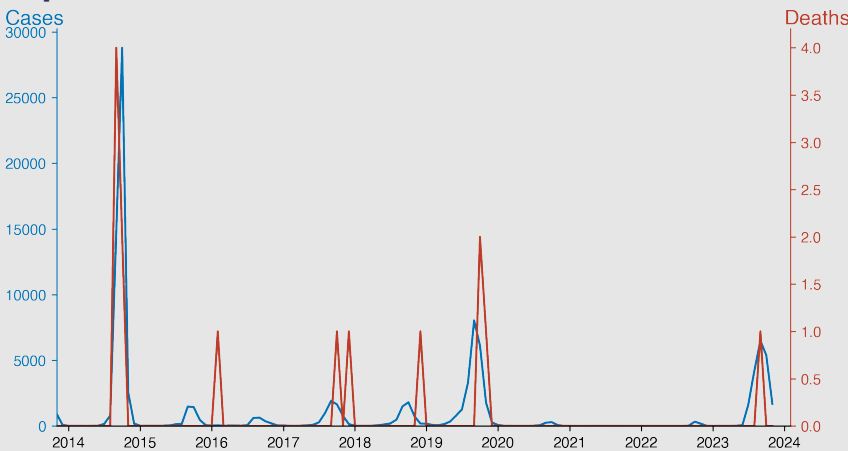
Dengue

November 2023

Introduction

Dengue is a mosquito-borne viral disease endemic in many tropical and subtropical regions of the world. It is caused by any one of four closely related dengue viruses, which are transmitted to humans via the bites of infected mosquitoes, primarily *Aedes aegypti*. Clinically, it can range from a mild flu-like illness to severe dengue, involving high fever, severe headache, pain behind the eyes, joint and muscle pain, rash, and mild bleeding. There are presently no specific antiviral medicines for dengue, but early detection and access to proper medical care significantly lowers fatality rates.

Temporal Trend



Highlights

- Dengue cases in mainland China show a consistent seasonality, peaking between August to October in each year.
2. The overall trend is an increased incidence of Dengue over time, with a notable spike in reported cases during 2014.
3. The incidence drastically reduced in 2020 to a lower level than before and remained lower in 2021 and 2022, but experienced another spike in 2023.
4. Mortality rate has generally been low, with occasional reported deaths usually coinciding with peak periods of dengue cases.

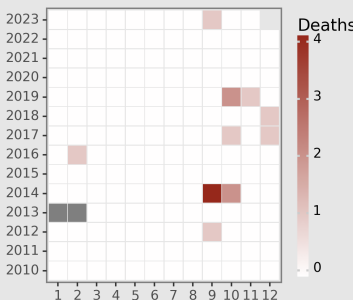
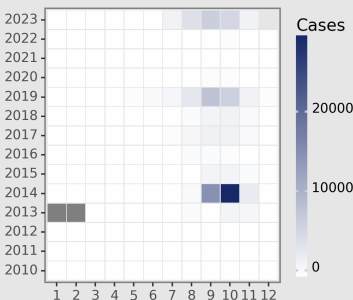
Cases Analysis

From the given data, Dengue cases in mainland China exhibit a clear seasonality, with spikes in cases typically occurring from July to November. This period likely aligns with the peak mosquito breeding season. Over the years, vast fluctuations in Dengue incidences are observed. Significant outbreaks were experienced in 2013, 2014, with a particularly severe outbreak in 2019 where cases soared above 8000 in September. Since 2018, an upward trend can be discerned, indicating an expanding transmission zone or increased disease activity. Recently, in 2023, there's been a major surge in cases starting from July, peaking in September with 6494 reported cases.

Deaths Analysis

The death toll due to Dengue in mainland China remains relatively low, showcasing the non-lethal nature of the virus or the effectiveness of China's healthcare system in treating severe dengue cases. From 2010 to 2023, only 11 fatalities were documented. Out of these, four deaths were recorded in 2014 during the worst outbreak, followed by two in 2019, and one each in 2012, 2017, 2018, 2022, and 2023. Despite increased case counts in recent years, the mortality rate isn't proportional, suggesting improved case management or reporting bias. Moreover, a significant period with zero mortalities can be observed from 2017 to 2021.

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