

Chinese Notifiable Infectious Diseases Surveillance Report

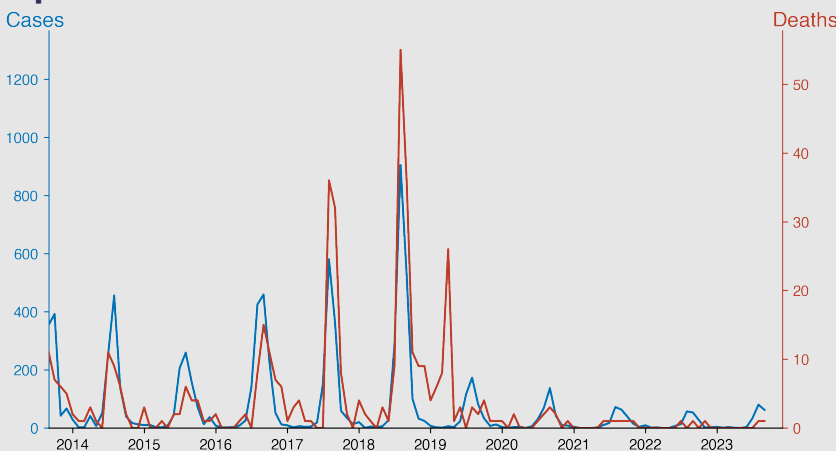
Japanese encephalitis

September 2023

Introduction

Japanese encephalitis (JE) is a viral disease that is spread through the bite of infected mosquitoes, particularly *Culex* species. The virus is a member of the *Flavivirus* genus and can cause inflammation of the brain. While most JE virus infections are mild or asymptomatic, a small percentage can result in severe clinical illness, characterized by rapid onset of high fever, headache, neck stiffness, disorientation, coma, seizures, spastic paralysis, and ultimately death. JE is most common in rural agricultural areas of Asia and the Western Pacific. Vaccines are available and are the most effective way to prevent the disease.

Temporal Trend



Highlights

The data shows a cyclical pattern with an increase in Japanese encephalitis cases from June through September each year.

- While the maximum number of cases occurred in August 2010 (1,301 cases), there has been a gradual decline in the maximum number of cases each year, with 80 cases in August 2023.
- The death rate has also declined over time, with the highest reported in August 2018 (55 deaths) and only 1 death reported in September 2023.
- As of September 2023, Japan encephalitis continues to present a significant health burden in China, albeit with decreasing trend in incidence and mortality.

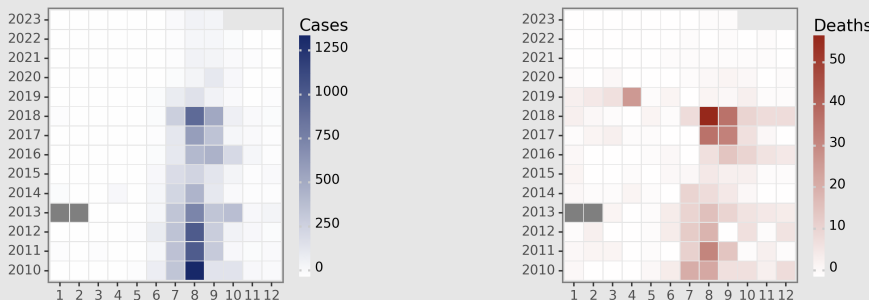
Cases Analysis

A retrospective look at the data from 2010 to 2023 reveals considerable variability in the number of Japanese encephalitis cases throughout the years. However, certain patterns emerge. Specifically, a substantial increase in cases is observed from May to September each year, peaking in August. This pattern could be tied to the vector's (mosquito) life cycle and increased human exposure in the warmer months. Notably, the numbers have been decreasing overall since 2018, implying successful prevention or control measures. However, occasional spikes such as in August 2023 stress the need for continued surveillance and proactive public health measures.

Deaths Analysis

The mortality associated with Japanese encephalitis in mainland China appears to follow a similar seasonal trend as the case count. A noticeable rise in fatalities can be observed from June to September. The highest number of deaths was recorded in August 2018 with 55 fatalities. Appreciably fewer deaths have been reported since 2019, perhaps indicating improved medical management or effective intervention strategies. Nevertheless, the persistent fatality count, even if lower, indicates the high-risk nature of the disease and the need for reinforced efforts towards early detection and treatment.

Distribution



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