Chinese Notifiable Infectious Diseases Surveillance Report

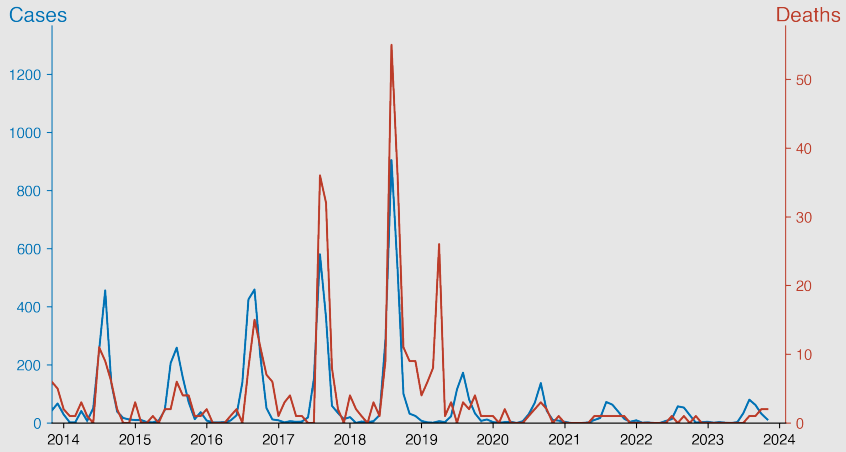
Japanese encephalitis

November 2023

Introduction

Japanese Encephalitis (JE) is a severe viral infection that primarily affects the brain. It is transmitted by mosquitoes, especially those in rural or agricultural areas often associated with rice cultivation and flood irrigation. Around 20% to 30% of JE cases are fatal, and 30% to 50% result in severe neurological complications. Although it is endemic in many parts of Asia and the Pacific, vaccinations have made it preventable. Still, there is no specific treatment – healthcare focuses on relieving severe clinical symptoms and supporting the patient to overcome the infection.

Temporal Trend



Highlights

- Seasonal peaks in case numbers are consistently observed during the summer months, with a particularly high prevalence from June to September, indicating a possible link to the vector's (i.e., mosquitoes) life cycle and activity.
- There has been a notable decrease in both cases and deaths since the peak in August 2010, suggesting improvements in disease control and prevention methods, possibly including increased vaccination and vector management.
- Mortality rates fluctuate but have generally declined over the years, with the highest number of deaths recorded in August 2018 and the notable drop in fatalities post-2020, potentially pointing to enhanced medical care.
- As of November 2023, the situation appears to be under control, with a low number of cases (12) and deaths (2), reflecting continued effective disease surveillance and response

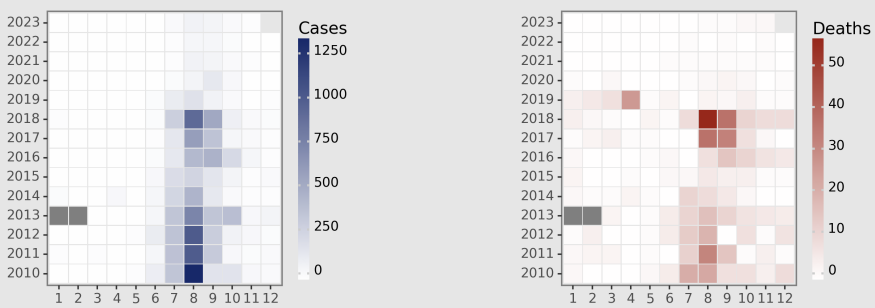
Cases Analysis

Japanese encephalitis (JE) in Chinese mainland shows a distinct seasonality with cases peaking during summer and early autumn, as seen in the months of July and August from 2010 to 2023. The highest number of cases was reported in August 2010 (1301 cases), followed by a consistent decrease in the subsequent years, especially from 2020 onwards. The data suggests a potential reduction in JE incidence, which could be due to intensified vaccination efforts, public health interventions, or underreporting. The year-on-year variability and missing data points complicate trend analysis and highlight the importance of continuous surveillance.

Deaths Analysis

The reported deaths due to JE also demonstrate a seasonal pattern aligning with the case counts, with the highest mortality observed in August of multiple years. The year 2018 reports the deadliest month with August having 55 deaths. Over the years, there has been a noticeable decrease in the fatality rate, particularly from 2019 to 2023. This trend might reflect improvements in both preventive measures, such as vaccination, and healthcare access, leading to better management of JE cases. Irregularities in the data and absence of fatality rates for some months indicate challenges in maintaining consistent disease surveillance and reporting.

Distribution



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