Chinese Notifiable Infectious Diseases Surveillance Report

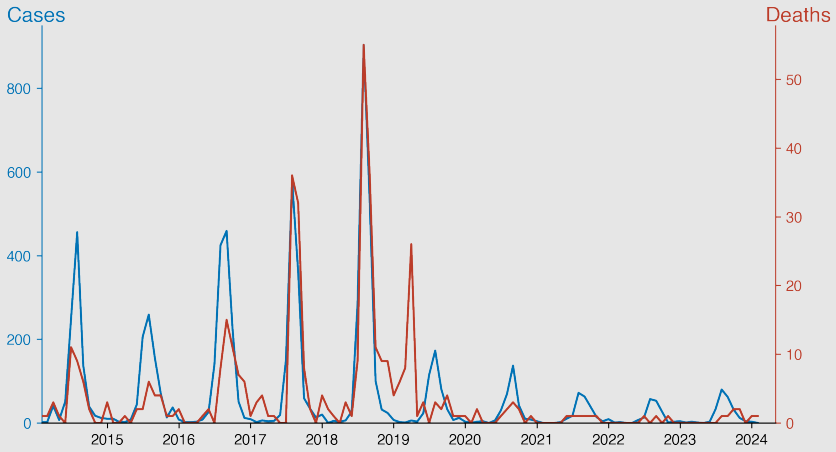
Japanese encephalitis

February 2024

Introduction

Japanese encephalitis (JE) is a viral disease that is spread through the bite of infected Culex mosquitoes. The virus primarily affects the central nervous system, potentially leading to inflammation of the brain, known as encephalitis. While most JE virus infections are mild or asymptomatic, a small percentage can result in severe clinical illness. Symptoms of severe infection include high fever, headache, neck stiffness, disorientation, coma, seizures, spastic paralysis, and ultimately can be fatal. JE is most prevalent in rural agricultural areas in Asia and the Western Pacific. Vaccination is the most effective preventive measure against the disease.

Temporal Trend



Highlights

- Seasonal pattern: Cases peak annually in the summer months (July-August), suggesting a relationship with seasonal vectors and host availability.
- Gradual decline in cases: A marked decrease in cases is observed over the years, with a high of 904 cases in August 2018 dropping to 80 in August 2023, indicating improved control measures.
- Mortality rates vary: Despite lower case numbers in recent years, deaths still occur, underscoring the necessity for ongoing public health interventions and access to medical care.
- Recent stability: A relative stabilization in the number of cases and deaths has been noted in the latest full year, 2023, suggesting effectiveness of current preventive strategies.

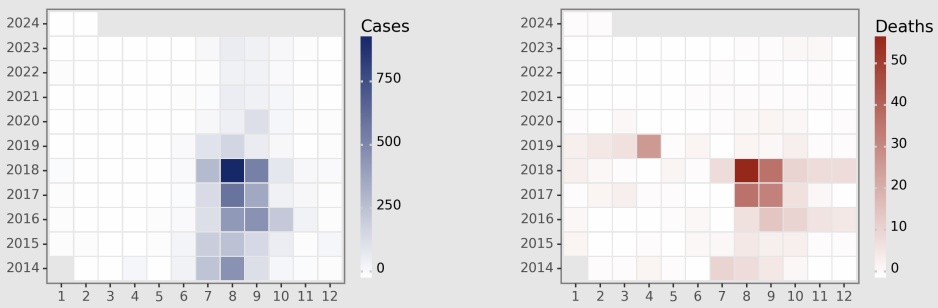
Cases Analysis

The cases of Japanese encephalitis in the Chinese Mainland vary from year to year, with generally low case numbers in the winter months (January-March), increasing dramatically as we move into the summer months (June-August). The most significant outbreaks have occurred in the summer months, most notably in July 2018, with 904 cases. However, post-2018, we've seen a gradual decline in the number of cases during the peak months, suggesting a potential improvement in preventive measures or disease control efforts.

Deaths Analysis

Death tolls have similarly followed a seasonal trend, with peaks occurring usually in the same high-incidence months as cases. The deadliest month recorded was August 2018 with 55 fatalities. Overall, mortality rates appeared to peak in 2018, with a subsequent notable decline in the following years. However, certain anomalies, like the rise in death rates during low-case months in 2019 (e.g., April with 26 deaths), suggest variations in disease severity, reporting accuracy, or potentially the impact of other health interventions or factors.

Distribution



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