Chinese Notifiable Infectious Diseases Surveillance Report

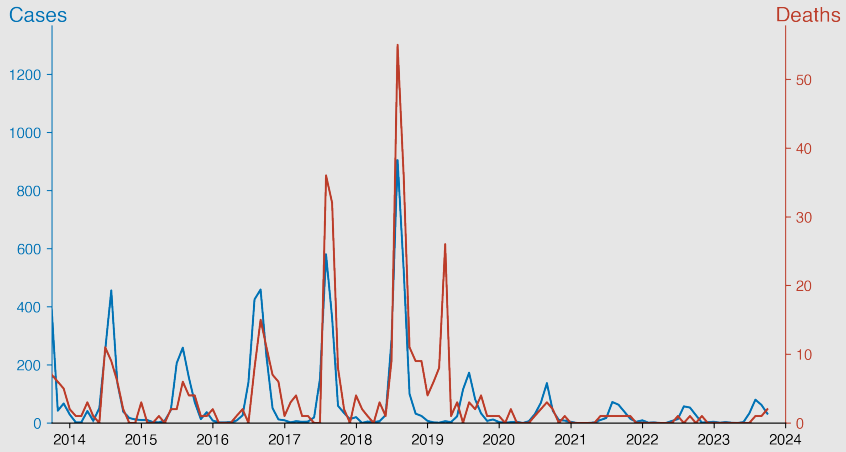
Japanese encephalitis

October 2023

Introduction

Japanese encephalitis (JE) is a viral disease transmitted by mosquitoes, primarily Culex species. The virus responsible originates from the Flaviviridae family, which also includes dengue and yellow fever. JE is prevalent in rural and agricultural regions of Asia and the Western Pacific. The disease primarily affects the central nervous system, causing inflammation of the brain. While most infections are mild or asymptomatic, approximately 1 in 250 cases evolves into severe clinical illness. Symptoms include high fever, headache, neck stiffness, disorientation, coma, seizures, and potentially death. Vaccination is the most effective preventive measure against JE.

Temporal Trend



Highlights

Significant seasonal variation is observed, with case spikes typically in July and August, correlating with mosquito activity.
- Over the years, there is a notable decrease in cases and deaths, indicative of effective disease control measures.
- Despite a general downward trend, occasional surges (e.g., August 2018) imply the need for continued vigilance.
- The current situation as of October 2023 shows a reduced number of cases and deaths, suggesting improvements in public health interventions and vaccination.

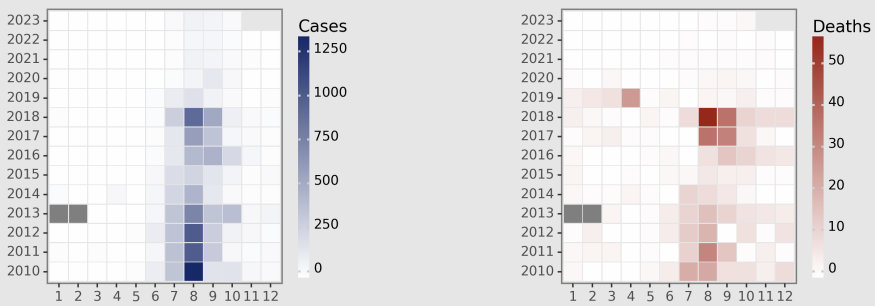
Cases Analysis

The distribution of Japanese encephalitis cases in mainland China from 2010 to 2023 exhibits a clear seasonal trend with a peak during the months of July and August each year, corresponding to the mosquito breeding season. While there is variability in cases year-on-year, there seems to be a gradual decrease from the pronounced peak of 1,301 cases in August 2010. Data from 2023 indicates a continued presence of infection, albeit much lower at 80 cases in August. The seasonality and declining trend suggest effective vector control and vaccination strategies may be at play.
Word Count: 100

Deaths Analysis

The mortality associated with Japanese encephalitis in mainland China also reflects a seasonal pattern, with higher death counts typically in the summer months when case numbers surge. Over the years, the deadliest month was August 2018, with 55 deaths. Although not as dramatic as case numbers, death counts also exhibit a decreasing trend. Moreover, the case fatality rate (CFR) appears to fluctuate, with some years like 2019 showing higher CFR despite lower cases, suggesting variations in either disease reporting, virulence, or access to healthcare.
Word Count: 100

Distribution



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Version: 2023-12-24 (UTC+)

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