Chinese Notifiable Infectious Diseases Surveillance Report

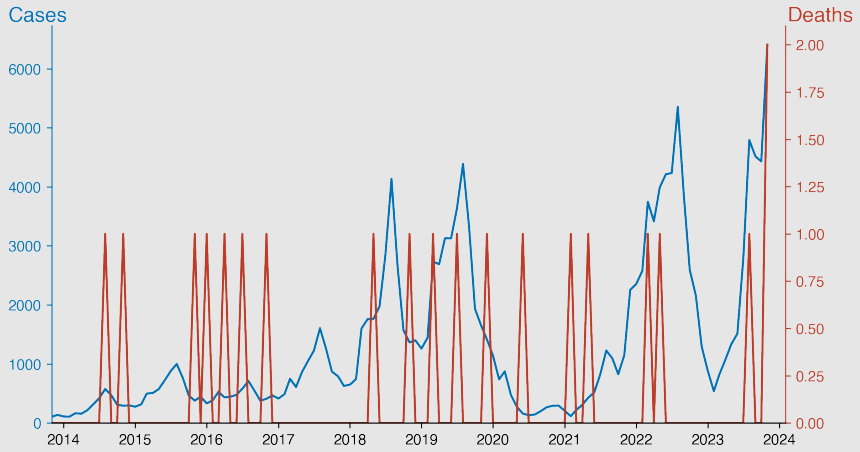
Pertussis

November 2023

Introduction

Pertussis, commonly known as whooping cough, is a highly contagious bacterial disease caused by Bordetella pertussis. It predominantly affects children, presenting symptoms such as severe coughing spells that end in a "whooping" sound during the intake of breath. Transmission occurs via respiratory droplets from coughing or sneezing. Vaccination has significantly reduced its occurrence, but it remains a serious health concern, particularly for infants who are too young for vaccination or people with compromised immune systems. It can lead to severe complications like pneumonia, seizures, or death, particularly in infants.

Temporal Trend



Highlights

- Substantial increase in pertussis cases from 2010 to 2023, with a notable peak in November 2023 reporting 6410 cases, the highest in the dataset.
- Fluctuations in reported deaths year-on-year, but overall low mortality with a slight rise to 2 deaths in November 2023.
- An observed seasonal pattern indicates a rise in cases during summer months, with a particularly sharp increase between May and August in recent years.
- Despite occasional drops in reported cases and deaths, there is a clear trend of case numbers escalating over the years, signaling a need for enhanced pertussis control measures in the Chinese mainland.

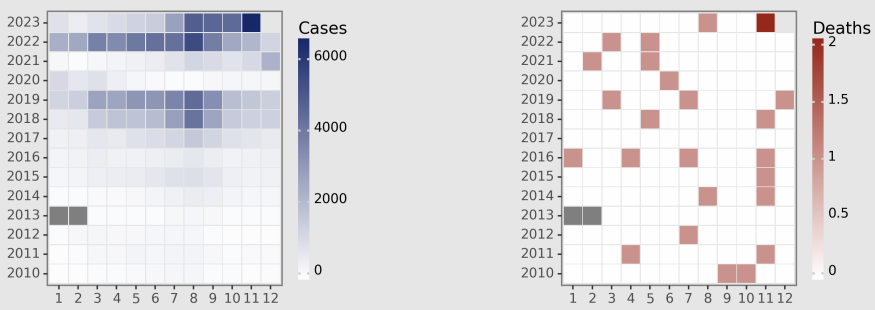
Cases Analysis

Pertussis cases in mainland China have demonstrated a clear upward trend from January 2010 to November 2023. Initial cases per month fluctuated around the low hundreds, gradually increasing each year. A significant rise is observed from 2017 onwards, with a notable peak in August 2023, reaching 4793 cases. Seasonal variation appears evident, with higher case numbers typically observed in the summer months, July and August. The data indicate sporadic reductions, such as in early 2020, potentially due to public health interventions or reporting variances. However, the overall trend suggests increasing pertussis incidence over time.

Deaths Analysis

The recorded pertussis-related deaths from January 2010 to November 2023 remained low, with many months reporting zero deaths. Despite the surge in cases, especially in later years, the number of deaths did not show a corresponding increase. There were occasional singular fatalities reported in some months (e.g., September 2010, April 2011), with the highest being two deaths in November 2023. The low mortality rate could indicate effective clinical management of cases or underreporting of fatalities. It is important to contextualize the death data with clinical and demographic information to understand their significance fully.

Distribution



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