Chinese Notifiable Infectious Diseases Surveillance Report

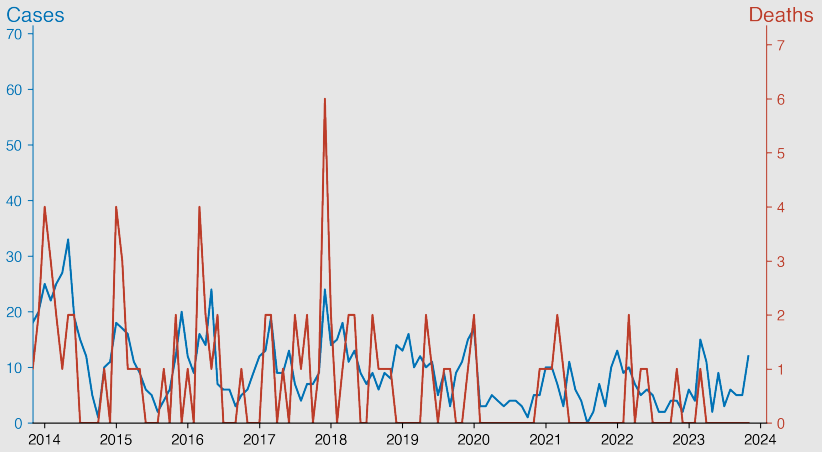
Meningococcal meningitis

November 2023

Introduction

Meningococcal meningitis is a severe bacterial infection of the thin layer covering the brain and spinal cord, caused by Neisseria meningitidis. It is potentially life-threatening, spreading through close contact, often among people living closely together, like in dormitories or military barracks. Symptoms include fever, headache, and stiff neck, with severe cases leading to septicemia. Vaccination is available and remains the most effective prevention method. Early diagnosis and treatment are critical to prevent complications or death.

Temporal Trend



Highlights

There is a clear trend of seasonality in the occurrence of Meningococcal meningitis, with higher incidence rates during the colder months from late winter to early spring.
2. Over the past 13 years, there has been a general decrease in the number of Meningococcal meningitis cases and deaths reported in China.
3. However, the case fatality rate (CFR) has remained relatively stable across the years with regular spikes–signifying an area of concern in terms of disease management.
4. As of November 2023, the situation appears to be under control with 12 cases and no reported deaths for the month.

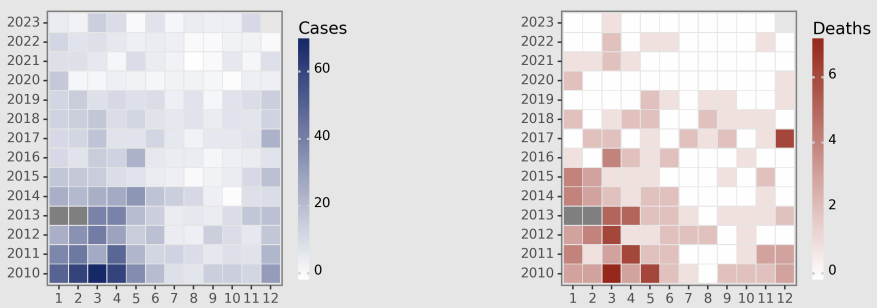
Cases Analysis

The reported data illustrates a clear seasonality and a gradual declining trend of Meningococcal meningitis in mainland China over 2010-2023. Cases markedly peaked during the first quarter each year, typically March, suggesting an environmental or behavioral influence correlated with the disease's spread. Extensive public health measures appear to have reduced the numbers successfully, with significant drops from 2010's 420 cases to 66 in 2023. Further investigation is needed to identify specific actions leading to the decline in reported cases.

Deaths Analysis

Death outcomes display a similar seasonal pattern but with notable drops, possibly reflecting improved healthcare treatments, early detection, and vaccination campaigns. Deaths peaked around 6-7 per month in early years, dramatically reducing to single digits from 2016 and onwards. Despite seasonal fluctuations, data shows a decrease in mortality over time, with a clear shift towards zero monthly deaths in later years. This trend suggests increasing clinical success in handling infected cases. Further research is needed to identify potential death seasonality correlations and continued mortality reduction strategies.

Distribution



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