Chinese Notifiable Infectious Diseases Surveillance Project

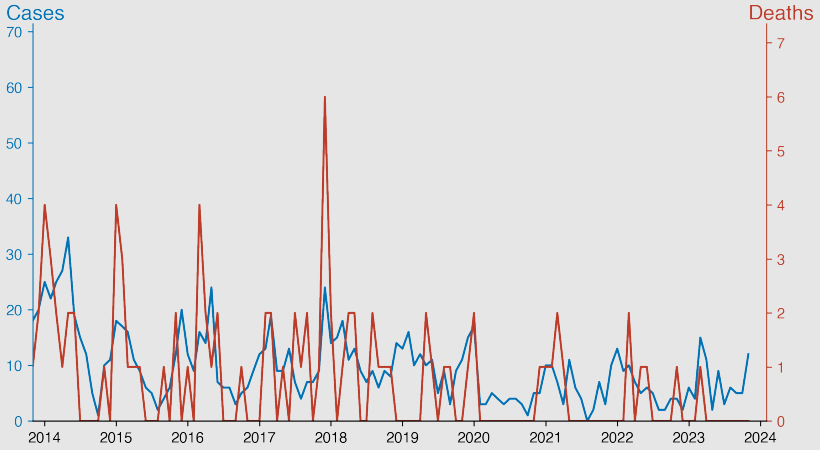
Meningococcal meningitis

November 2023

Introduction

Meningococcal meningitis, predominantly caused by Neisseria meningitidis bacteria, is a severe and potentially fatal infection of the meninges, the protective membranes covering the brain and spinal cord. This highly contagious disease is transmitted through respiratory droplets or close contact with an infected person. It's characterized by high fever, stiff neck, sensitivity to light, and confusion. Mass outbreaks are common in the 'meningitis belt' of Sub-Saharan Africa. Vaccination and rapid treatment substantially reduce the morbidity and mortality rates. It is a health emergency and requires immediate medical attention.

Temporal Trend



Highlights

- Marked decline in meningococcal meningitis cases in China from 2010 to 2023, with a significant drop in cases and deaths, especially between 2020 and 2023.
- Seasonal patterns indicate higher incidence in early months of each year, with a trend of lowest case numbers during late summer and autumn.
- The absence of death reports in November 2023 and minimal cases reflects the effectiveness of public health control measures.
- Overall, the data suggests improved management, possibly due to vaccination efforts and heightened disease surveillance.

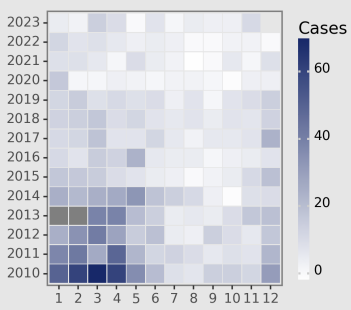
Cases Analysis

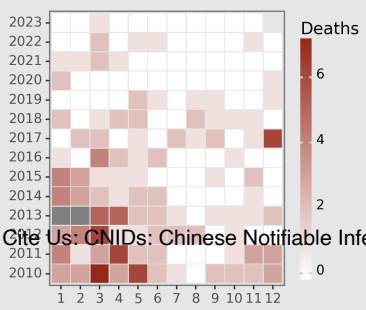
From 2010 to 2023, reported meningococcal meningitis cases in mainland China showed notable seasonality, peaking predominantly in early spring (e.g., March) and declining throughout the summer months. The highest number of monthly cases (68) was reported in March 2010. A general downward trend is observed over the years, with the counts decreasing from an average of around 25 per month in 2010 to single digits in later years, suggesting improved disease control or underreporting.

Deaths Analysis

Death data mirrors the declining trend in cases but shows considerable variability in case-fatality rates. The highest count (7 deaths) was reported in March 2010. Fortunately, there is a substantial decrease in fatalities over the observed period, and from 2021 onward, the number of monthly deaths has often been zero. This reduction could indicate advancements in rapid diagnosis, effective treatment, vaccination, and public health interventions.

Distribution





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