Chinese Notifiable Infectious Diseases Surveillance Report

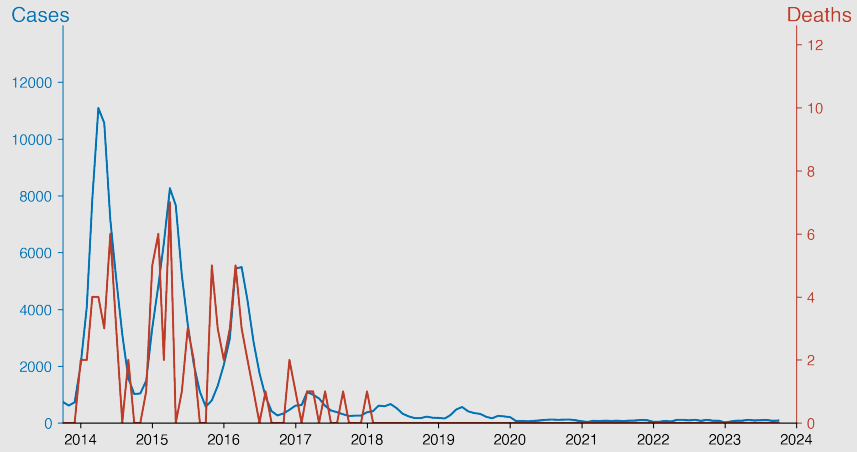
Measles

October 2023

Introduction

Measles is a highly contagious viral disease primarily affecting children. It is caused by the measles virus, a member of the genus Morbillivirus within the family Paramyxoviridae. The disease is transmitted via respiratory droplets or direct contact with an infected person's nasal or throat secretions. Symptoms usually appear 10-12 days after exposure and include high fever, cough, runny nose, and conjunctivitis, followed by a characteristic red rash. Despite the availability of an effective vaccine, measles remains a leading cause of death among young children globally, particularly in areas with low vaccination coverage.

Temporal Trend



Highlights

A significant declining trend in measles cases and deaths from 2010 to 2023, indicating improved disease management and prevention strategies.

- In particular, the annual caseload decreases sharply after 2016, maintaining low levels, suggesting effective vaccination coverage and possibly a high level of herd immunity.
- The consistently low number of deaths from 2011 onwards, often zero, reflects the capacity for adequate healthcare provisions to treat measles cases.
- Data from 2023, including the most recent statistics for October, shows sustained low case numbers, with no reported deaths, demonstrating effective ongoing containment of the disease.

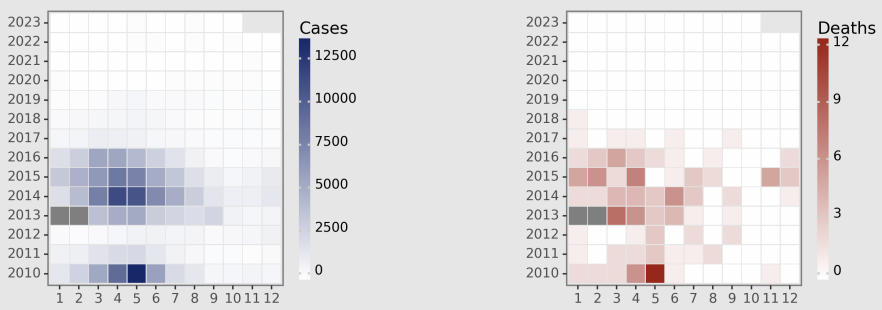
Cases Analysis

The measles cases in mainland China over the years reflect a significant surge until the midpoint of the last decade, with the highest number of monthly cases occurring in May 2010 with 13,318 cases. A subsequent decline follows, which becomes more pronounced from 2015 onwards. Starting in 2020, there is a marked decrease in cases, with numbers rarely exceeding 100 monthly. This reduction could be attributed to strengthened immunization programs and potentially reduced transmission related to public health measures for COVID-19. The data for January, February, and March 2013 is missing, which precludes a full analysis for that period.

Deaths Analysis

Fatalities due to measles in mainland China were intermittent from 2010 to 2020, with the highest mortality reported in May 2010 and April 2015, each recording 12 and 7 deaths, respectively. Notably, from 2020 onwards, no deaths were reported despite the appearance of cases, possibly indicating improved medical interventions and case management. The initial years showcase a correlation between high caseloads and mortality, which is disrupted in latter years, likely a testament to enhanced healthcare systems' responsiveness and vaccination coverage minimising measles-related mortality.

Distribution



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