

# Chinese Notifiable Infectious Diseases Surveillance Project

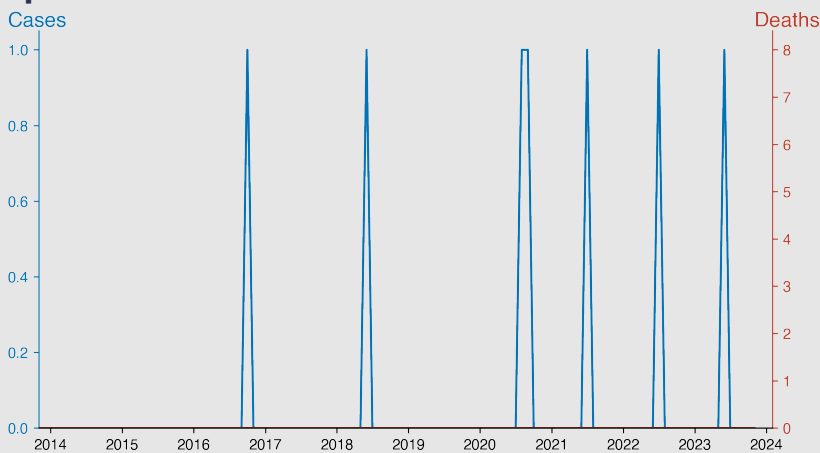
## Diphtheria

November 2023

### Introduction

Diphtheria is a severe bacterial infection affecting the respiratory tract or skin. Caused by *Corynebacterium diphtheriae*, it is transmitted through person-to-person contact or contaminated objects. Symptoms range from mild sore throat, fever, and enlarged lymph nodes to serious complications like myocarditis and neuritis. The diphtheria toxin produced by the bacteria may cause damage to the heart, kidneys, and nervous system. This potentially fatal infection has been largely controlled in developed regions through widespread immunization, but remains a threat in underdeveloped areas.

### Temporal Trend



### Highlights

- Diphtheria is well-contained in mainland China, with almost no cases or deaths from January 2010 to November 2023.
- Isolated occurrences in November 2010 (0 cases, 8 deaths), October 2011, September 2012, October 2016, June 2018, August & September 2020, July 2021, and July 2022 had no subsequent outbreaks.
- November 2010 shows deaths without cases, suggesting possible retrospective fatality reporting or data discrepancies.
- Effective vaccination and public health strategies likely contribute to the low incidence, but continuous monitoring is essential to prevent resurgence.

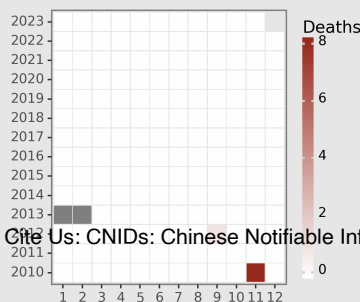
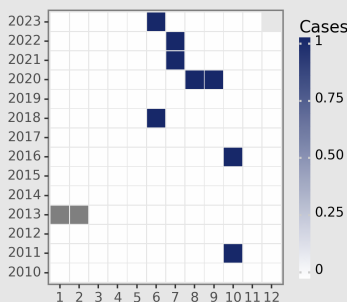
### Cases Analysis

From January 2010 to November 2023, the Chinese mainland reported minimal cases of diphtheria, marking a remarkably low incidence of the disease, likely attributed to effective vaccination programs. Only five cases were identified over nearly 14 years - one each in October 2011, October 2016, June 2018, August and September 2020, and July 2021, followed by a singular case in June 2023. These sporadic occurrences suggest either rare vaccine failures, decreased vaccine coverage, or potential gaps in herd immunity, each case potentially representing an isolated event or limited outbreak.

### Deaths Analysis

Despite the low incidence of diphtheria cases in the Chinese mainland between January 2010 and November 2023, there were reported deaths, totaling 9. Eight deaths were reported in November 2010, without corresponding cases, raising questions about data completeness or error. Another death occurred in September 2012, similarly without a recorded case. The absence of recent deaths implies improved clinical management and possibly stronger disease surveillance, contributing to timely interventions and reduced mortality in recent years.

### Distribution



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