

# Chinese Notifiable Infectious Diseases Surveillance Project

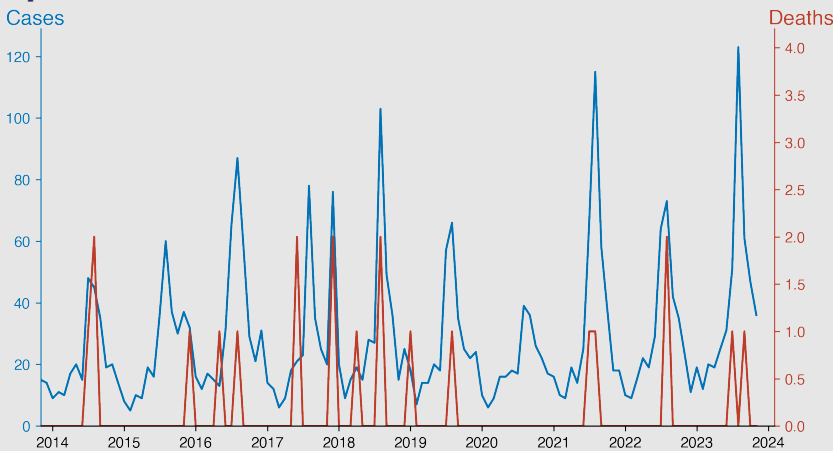
## Anthrax

November 2023

### Introduction

Anthrax is a serious, potentially lethal disease caused by *Bacillus anthracis*, a spore-forming bacterium. It primarily affects livestock and wild game, but humans can contract Anthrax through exposure to infected animals, their products, or contaminated environments. Human cases are rare and generally present in three forms: cutaneous (skin), inhalation, and gastrointestinal. While treatable with antibiotics, if not promptly diagnosed and managed, it can be fatal. Symptoms can range from skin sores to severe breathing problems or nausea, depending on the type of exposure.

### Temporal Trend



### Highlights

- Anthrax cases in Mainland China show a seasonal surge during summer and early fall, particularly in August, in line with *Bacillus anthracis* activity in warm soil.
- August 2023 saw the highest number of cases at 123, indicating recurring seasonal peaks requiring increased preventive measures.
- Mortality rates have been generally low, with occasional deaths, suggesting effective outbreak management and treatment.
- As of November 2023, cases decreased to 36, reflecting the post-summer seasonal decline and possible effective control of the outbreak.

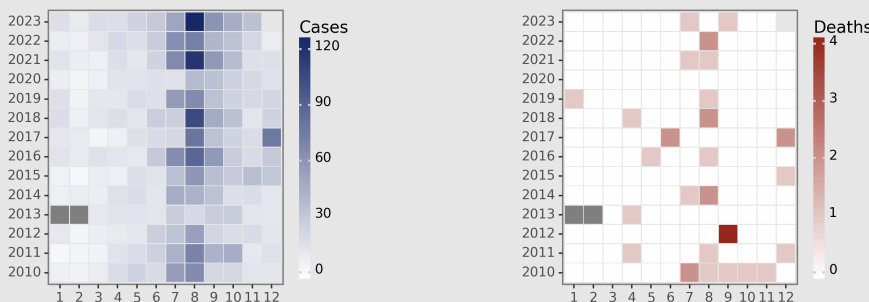
### Cases Analysis

Anthrax cases in Chinese mainland exhibit pronounced seasonality, with a prominent peak typically in August and secondary peaks in July and September, which likely corresponds to increased interaction of humans with infected animals or contaminated animal products during agricultural peak seasons. Over the analyzed period, there is an upward trend in cases starting in May, with annual peaks varying from 56 cases in 2010 to a high of 123 cases in 2023 August. A noticeable dip occurs in late autumn and winter months, suggesting a potential link to seasonal activities and temperatures which may influence bacterial proliferation or human exposure.

### Deaths Analysis

Anthrax-associated mortality remains low, with zero deaths reported in most months. However, sporadic fatalities occur, the majority of which are concentrated in the late summer months, aligning with the peak incidence of cases. The highest number of deaths recorded in a single month is four, in 2012 September. Despite variability, there is no clear upward or downward trend in fatalities per annum within this dataset. The total number of deaths over the entire period is low compared to the total cases, suggesting that while outbreaks are somewhat cyclical and can be substantial, the case-fatality rate remains relatively low.

### Distribution



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