

Chinese Notifiable Infectious Diseases Surveillance Report

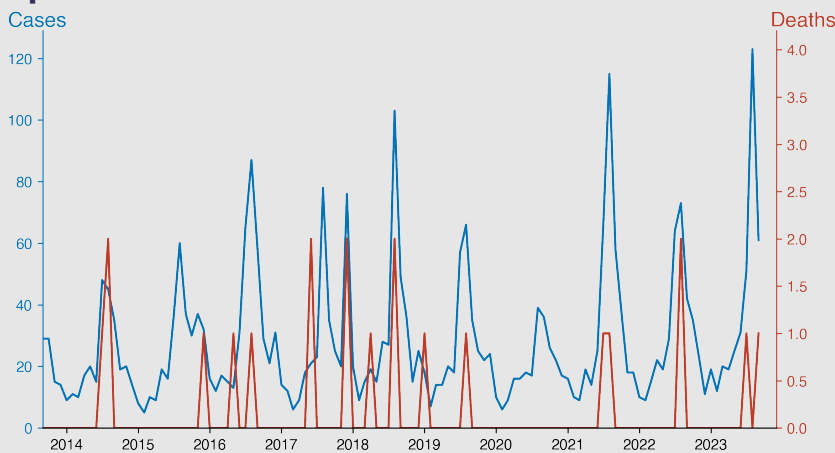
Anthrax

September 2023

Introduction

Anthrax is a serious infectious disease caused by the spore-forming bacterium *Bacillus anthracis*. It most commonly occurs in wild and domestic mammals, such as cattle, sheep, goats, camels, antelopes, and other herbivores, but it can also infect humans when they are exposed to infected animals or tissue from infected animals. Anthrax spores can survive in the environment for years and humans can become infected through skin contact, inhalation, or ingestion. There are three forms of anthrax in humans: cutaneous, inhalation, and gastrointestinal. Anthrax is treatable with antibiotics if caught early.

Temporal Trend



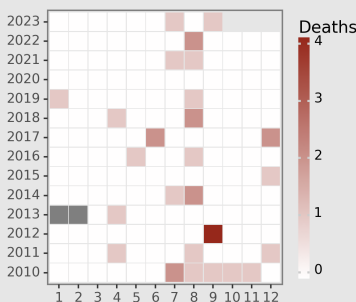
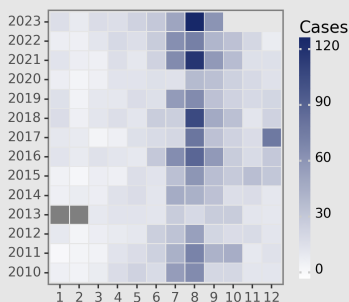
Cases Analysis

The data suggests a seasonal trend in Anthrax cases in mainland China from 2010 to 2023, with a noticeable surge predominantly during the summer months, primarily between July and August. This pattern could potentially correlate to climatic factors favoring bacteria proliferation or changes in human-animal interactions. Over the years, there is a minimal overall rise in cases, exemplified by 66 cases in August 2010 versus 123 in August 2023. This may indicate evolving conditions that need to be investigated further.

Deaths Analysis

The number of reported deaths remains relatively low compared to the number of reported cases of Anthrax, indicating a lower fatality rate. Fatalities also appear sporadic and not directly proportional to the number of cases. For example, even in months with higher cases like August, deaths sometimes show zero and sometimes as high as 2. This suggests effective disease management and treatment strategies. Anomalies such as 4 deaths in September 2012 despite lesser cases pose questions about variable disease virulence, diagnosis, or reporting accuracy to be explored.

Distribution



Highlights

There is a clear seasonal pattern in the occurrence of Anthrax, with majority of cases peaking in the summer months (July and August), indicating a pronounced seasonality of the disease.

- In recent years, there has been a worrying upward trend in annual cases, with the highest recorded in August 2023 with 123 cases. This could suggest a rising prevalence and expanding geographical distribution of the disease determining factors.
- The Anthrax fatality rate remains low throughout the years but sporadic fatalities do occur, indicating the requirement for improved case management and public health intervention.
- Considering high peaks of incidence in summer, further research into the reasons (possible relation to livestock exposure, climatic factors etc.) could be of use for preventive strategies.

CNIDs

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Version: 2023-12-24 (CST+08)