Chinese Notifiable Infectious Diseases Surveillance Report

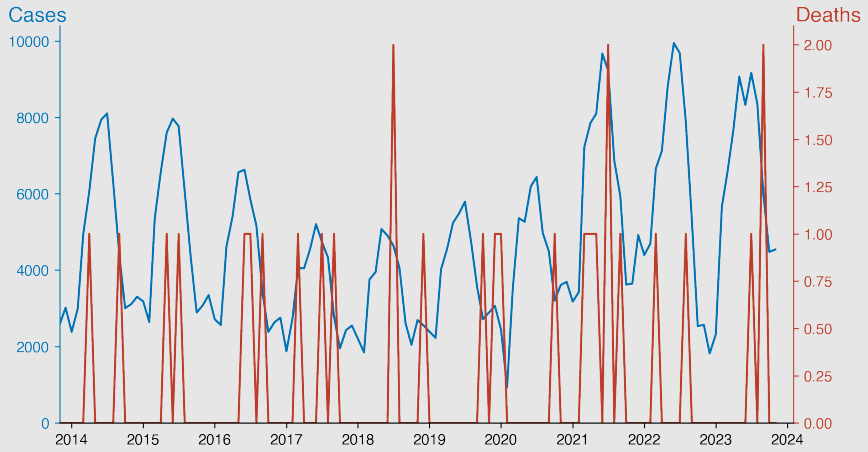
Brucellosis

November 2023

Introduction

Brucellosis is a zoonotic infection caused by the bacterial genus Brucella. The disease primarily infects animals like goats, sheep, and pigs, but can spread to humans via consumption of unpasteurized dairy products or through direct contact with infected animals. In humans, it manifests as fever, fatigue, and musculoskeletal pain, often mistaken for flu. Chronic Brucella infection may lead to complications affecting the heart, nervous system, or joints. Though largely eradicated in developed nations, brucellosis remains endemic in many parts of the world with inadequate animal disease control.

Temporal Trend



Highlights

- Clear seasonal pattern with case peaks during summer months, likely associated with heightened agricultural activity and greater animal contact.
- Upward trend in Brucellosis cases from 2013 to 2023, with the highest annual peaks reaching 9943 cases in June 2022.
- Deaths are very rare despite the growing incidence, highlighting effective clinical management upon diagnosis.
- The consistent case numbers into November 2023 signal persistent endemic transmission without significant mortality impact.

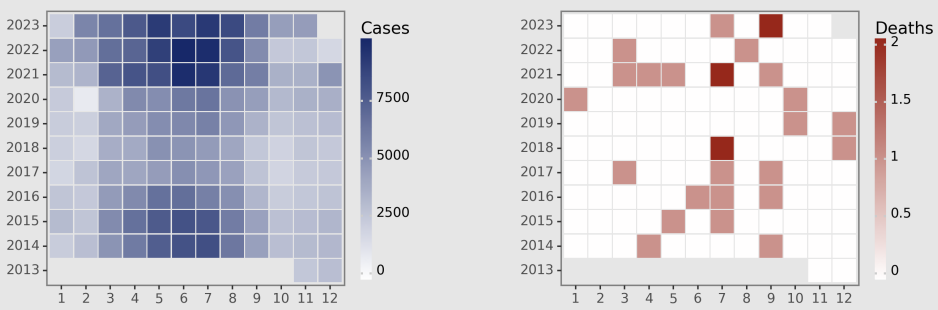
Cases Analysis

Brucellosis case data from the Chinese mainland shows a clear seasonal pattern, with lower case counts in early winter (December to February) and higher counts in late spring to early autumn (May to September). Cases began at 2580 in November 2013 and have generally increased annually, with 2023 displaying some of the highest numbers, especially with a notable peak of 9164 cases in July 2023. A rhythmic increase and decrease pattern is observed across the years, suggesting a potential link to agricultural cycles and livestock breeding periods, which are risk factors for brucellosis transmission.

Deaths Analysis

Brucellosis-associated mortality in the Chinese mainland is remarkably low, with a total of 15 deaths reported from November 2013 to November 2023. Mortality data show sporadic instances of death, with the highest number recorded in September 2023, at two deaths. The infrequent occurrence of deaths suggests that despite the prevalence and seasonal spike in brucellosis cases, the condition has a relatively low case-fatality rate or is being effectively managed to prevent fatal outcomes. Lack of a coherent trend in mortality across the years further implies variable factors affecting lethality, such as access to healthcare or virulence of the strains involved.

Distribution



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