Chinese Notifiable Infectious Diseases Surveillance Report

Brucellosis

December 2023

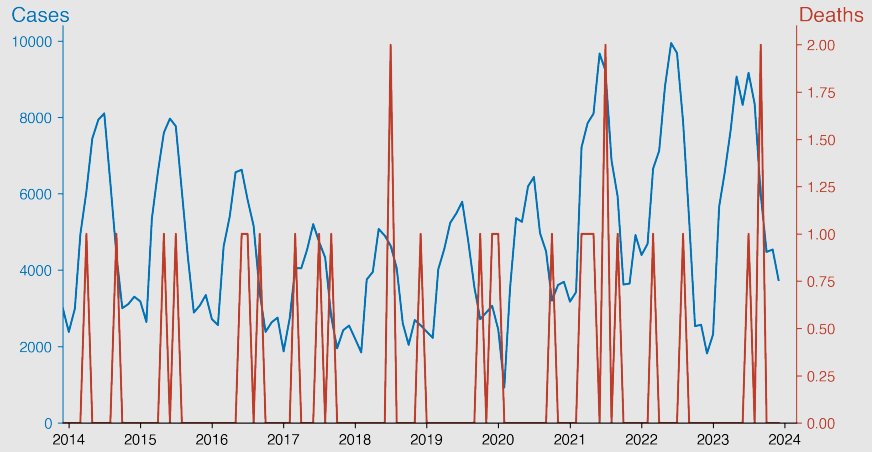
Introduction

Brucellosis is a zoonotic infection, caused by the bacterial genus Brucella, transmitted from animals to humans through the ingestion of contaminated food products, direct contact with an infected animal, or inhalation of aerosols. Mostly affecting livestock (cows, goats, pigs, etc.), it can cause fever, joint pain and fatigue in humans. It's globally distributed, notably in Mediterranean, Middle Eastern, and Central Asian countries. Vaccination programs for animals increment the disease control. Although treatable, Brucellosis presents a public health concern due to its occupational exposure risk.

Highlights

- A steady increase in brucellosis cases over the decade, with a noticeable peak in 2021 and subsequent decline, yet still maintaining higher levels compared to early 2010s.
- The disease has shown seasonality, with more cases reported during the spring and summer months (May to August) annually, possibly linked to agricultural practices.
- Mortality remains extremely low despite the fluctuation in case numbers, suggesting improved disease management, early detection, and effective treatment protocols.
- The lowest number of cases in over a decade was observed in February 2020, coinciding with stringent COVID-19 control measures that may have inadvertently impacted the transmission of brucellosis.

Temporal Trend



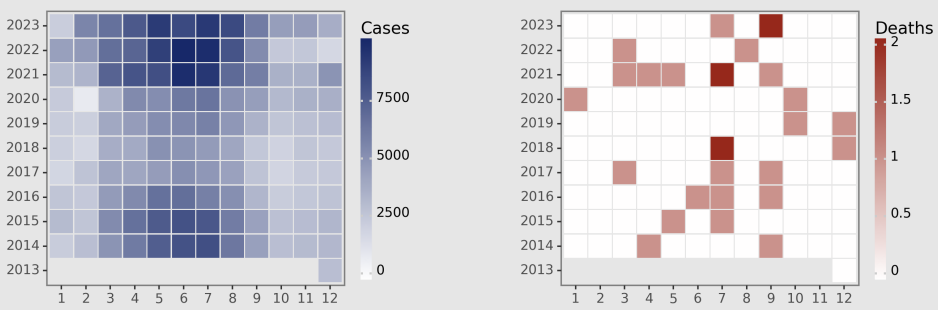
Cases Analysis

Brucellosis cases in Chinese mainland depict a seasonal pattern with peaks generally occurring in summer months—May to August. The data shows an overall increasing trend in cases from 2013 to 2023. The case numbers swelled to multi-year highs consecutively from 2019, culminating in 2023 July at 9,164 cases, suggesting potential worsening in either transmission, reporting, or both. Fluctuations in cases seem to correlate with agricultural cycles and could indicate occupational exposures. A notable drop in February 2020 corresponds with the COVID-19 pandemic onset, possibly due to movement restrictions or shifts in healthcare prioritization.

Deaths Analysis

Brucellosis-related deaths in Chinese mainland over the decade are remarkably low compared to the case numbers, indicating a low mortality rate for the disease. Most years record zero or a single death, with occasional spikes, such as two deaths in July and September 2023. This could suggest effective treatment is available, if accessed promptly. However, sporadic fatalities highlight potential complications or variations in disease severity, warranting continual monitoring of health interventions and access to care, to ensure mortality remains low amidst fluctuating case numbers.

Distribution



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