Chinese Notifiable Infectious Diseases Surveillance Report

Human infection with H7N9 virus

February 2024

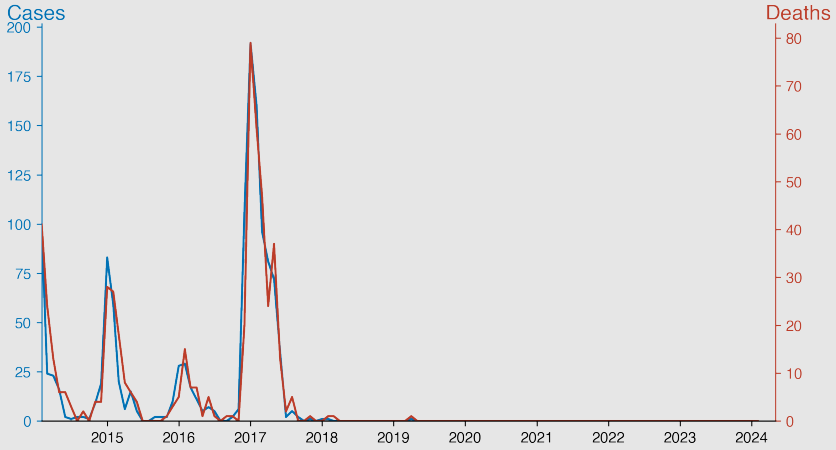
Introduction

Human infection with the H7N9 virus is a respiratory illness caused by a subtype of influenza A viruses. First reported in China in 2013, the majority of human cases have been linked to exposure to live poultry or contaminated environments. H7N9 infections can range from mild or asymptomatic to severe and even fatal. There is potential for human-to-human transmission, but it remains limited. The virus continues to pose a significant public health risk with pandemic potential, due to possible mutations that could facilitate easier transmission among humans. Vaccines and antiviral drugs are used for prevention and treatment respectively.

Highlights

- The H7N9 virus saw a peak of human infection cases (192) and deaths (79) in mainland China in January 2017.
- Category-wise, major outbreaks were observed in the early parts of the years (January-March) between 2014 to 2017, with a concerning mortality rate.
- From January 2018 onwards, there has been a significant decline in both new cases and consequent deaths, virtually dropping to zero.
- As of February 2024, there have been no new reported cases or deaths from the H7N9 virus. This may suggest either effective containment measures or a return to the virus's primarily avian transmission, with limited human impact.

Temporal Trend



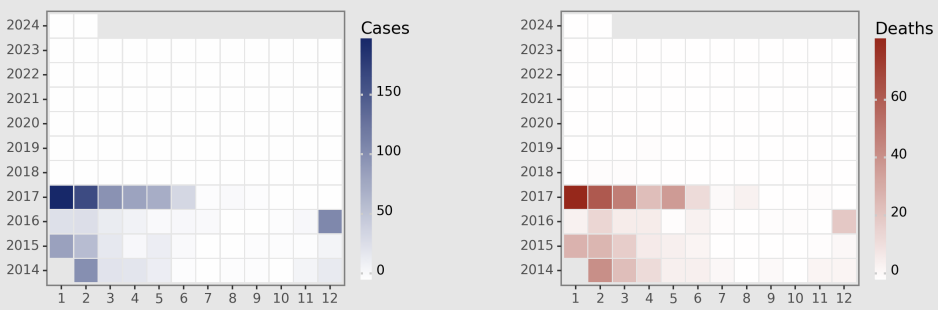
Cases Analysis

H7N9 virus infections showed a discernible seasonal pattern, with significant spikes in cases documented in early months of each year, particularly between January and April from 2014 to 2017. The highest case count was recorded in January 2017 with 192 cases. From 2018 onwards, human infections became sporadic, then ceased altogether from July 2019. It is worth noting the sharp decline in incidences post-2017 indicating effective control measures or changes in virus prevalence or transmission.

Deaths Analysis

The fatality count peaked concurrently with case surges, highlighting the 2017 spike with 79 deaths in January. The Case Fatality Rate (CFR) fluctuates, with several months like 2014 March and 2017 August showing 100% fatality. Deaths ceased post-April 2019, which mirrors the case pattern. The absence of deaths from May 2019 onwards could align with the hypothesis of effective containment strategies or lack of detection/reporting, assuming no underreporting of fatalities.

Distribution



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