Chinese Notifiable Infectious Diseases Surveillance Report

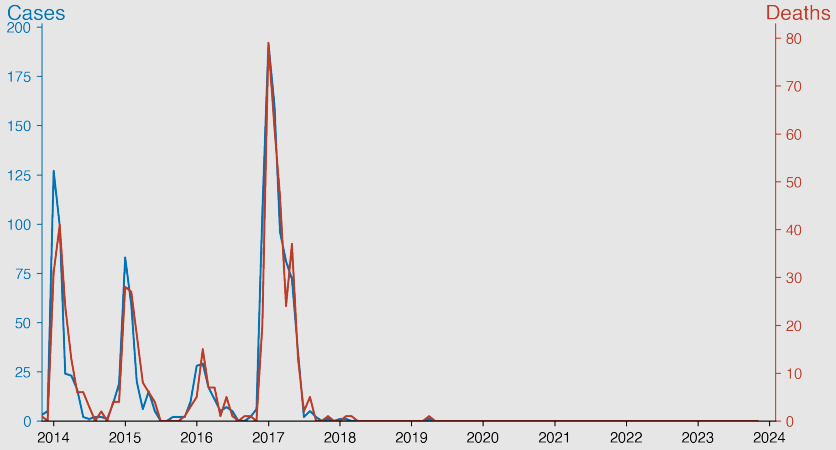
Human infection with H7N9 virus

November 2023

Introduction

H7N9 is a subtype of influenza virus that has been detected in birds in the past. This particular strain had never before been found in humans until it was reported in China in March 2013. Human infection with H7N9 virus is characterized by fevers, severe and often progressive pneumonia, and acute respiratory distress syndrome. Transmission typically occurs through direct contact with infected poultry or contaminated environments. Antiviral treatment is most effective when initiated early, but the virus can be resistant to these drugs.

Temporal Trend



Highlights

- A significant peak in human cases of H7N9 was observed during the winters of 2013 to 2017, with the highest incidence in January 2017 (192 cases) followed by a high mortality rate (79 deaths).
- After the 2017 surge, there has been a marked decline in both cases and deaths, with only sporadic cases reported in 2019 and none thereafter up to the current date of November 2023.
- The current disease situation, as of November 2023, indicates no reported cases or deaths, suggesting effective control measures or potential changes in the virus's transmissibility to humans.
- Continued surveillance and research are necessary to maintain this state of no reported cases and to prevent potential future outbreaks of the H7N9 virus.

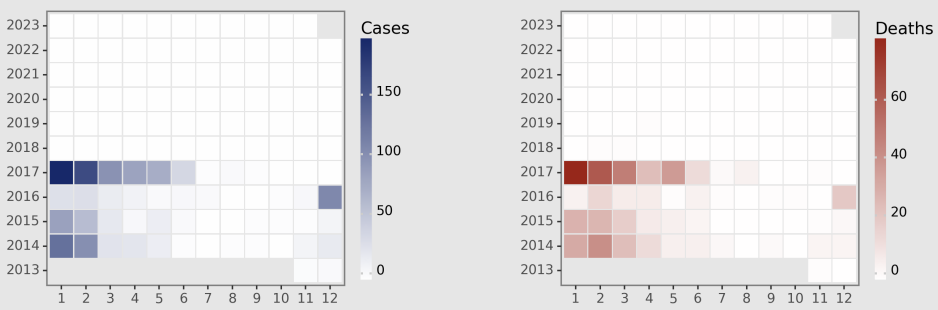
Cases Analysis

From 2013 to 2017, Chinese mainland reported cases of H7N9 with a notable peak in 2017, reaching 192 cases in January and declining thereafter. The highest incidence occurred during the winter and spring months, aligning with increased influenza activity. After a steep decline post-2017, no cases have been reported since April 2019. This suggests that intervention measures may have been effective, or the virus may have undergone changes diminishing its impact on humans.

Deaths Analysis

The fatality trend closely follows the incidence curve, with the highest number of deaths (79) also recorded in January 2017. The case-fatality ratio (CFR) was particularly high during the 2014 March outbreak, where 100% of reported cases resulted in death. The last reported death was in April 2019. The absence of cases and deaths post-April 2019 indicates successful containment or potential underreporting. Peak mortality also occurred in colder months, which might reflect higher virus survival and transmission rates.

Distribution



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