

Armed Forces Health Surveillance Center H7N9 Surveillance Summary (11 FEB 2015)



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DEPARTMENT OF DEFENSE (AFHSC)

Avian Influenza A (H7N9) Surveillance Summary #47

11 FEB 2015



CASE REPORT: As of 11 FEB 2015, 617 (+85) human cases of avian influenza A (H7N9) including 205 (+19) deaths have been reported in China, Hong Kong, Taiwan, Malaysia, and Canada. On 1 FEB, WHO reported two Canadians with recent travel to China previously suspected of H7N9 infection were confirmed positive on 26 JAN and 29 JAN.

On 4 FEB, WHO reported 83 confirmed H7N9 cases in eight provinces of China: Fujian (30), Guangdong (30), Jiangsu (7), Jiangxi (1), Shandong (1), Shanghai (2), Xinjiang (1), Zhejiang (11). It is unclear how many of these newly confirmed cases were previously reported by the Hong Kong Center for Health Protection (CHP) or the China CDC. Additionally, media sources note reported case counts are likely low due to irregular reporting from many Chinese provinces.

TRANSMISSION: A recent study by the CDC, to be published in the APR edition of the Journal of Emerging Infectious Diseases, showed that although human-to-human transmission H7N9 virus is uncommon, evidence has been reported of probable transmission among several family clusters, between two household contacts, and between a doctor and an infected patient. The CDC therefore suggests family members, health care providers, and other close contacts of H7N9-infected persons may be at risk for infection.

DIAGNOSTICS: As of 7 JAN 2015, updated H7N9 testing and reporting guidelines and a list of DoD laboratories can be found on the AFHSC website. On 19 APR 2013, FDA issued an Emergency Use Authorization for the CDC Human Influenza Virus Real-Time RT-PCR diagnostic panel – Influenza A/H7 assay; this was made available on 26 APR 2013.

SURVEILLANCE: Reagents to be used for surveillance testing purposes are available via the CDC website. NMRC has produced amplicon H7N9 positive testing control material using the published WHO primers/probes. Kits have been sent to AFRIMS, NAMRU-3, NAMRU-6, NAMRU-2 Phnom Penh, NMRC-A and NHRC for surveillance purposes. Nineteen DoD laboratories have been sent diagnostic kits, as have all 50 states, DC, Puerto Rico, and more than 60 international labs.

TREATMENT: WHO confirms oseltamivir (Tamiflu) and zanamivir (Relenza) are recommended treatments for H7N9.

INTERAGENCY/GLOBAL ACTIONS: CDC posted interim guidance for H7N9 case definitions in the U.S. and also updated FAQs for H7N9 on 9 SEP 2014. On 6 FEB 2015, CDC issued a travel notice (Watch – Level 1, Practice Normal Precautions) advising people travelling to China to avoid contact with poultry (including poultry markets and farms), birds, and their droppings. CDC and WHO advise no special screenings at points of entry, and no trade or travel restrictions. On 11 FEB, the Taiwan CDC issued a travel alert for Guizhou Province after the province reported its first case of H7N9 since JAN 2014.

BACKGROUND: On 1 APR 2013, the WHO reported three human cases of infection with a novel influenza A (H7N9) virus in China. This was the first time human infection with H7N9 had been detected. Seasonality has been observed since the beginning of this outbreak with a consistent pattern of declining incidence through the summer months followed by a spike in cases in the winter months. Page 5 illustrates these ongoing seasonal trends for H7N9 cases.

The overall case-fatality proportion among known cases is 33%, the average age of those affected is 53 years, and at least 137 of the cases reported have been female. The most recent known date of onset was 5 FEB 2015, although many cases have been reported without such detailed information.

Cases have been reported in 14 provinces of China: Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hebei, Henan, Hunan, Jiangsu, Jiangxi, Jilin, Shandong, Zhejiang, and Xinjiang; and two municipalities, Beijing and Shanghai. Over 300 cases have been reported from the Zhejiang and Guangdong provinces alone.

Four cases identified in Taiwan are presumed to have become infected while traveling in Jiangsu. Additionally, cases in Hong Kong (12), Malaysia (1), and Canada (2) are thought to have been imported, most likely from Guangdong, China.

At least 10 (+3) small family clusters of confirmed illness have been identified since APR 2013, although the majority of human cases have reported exposure to poultry, often via live bird markets. Consequently, Shanghai closed its live bird markets from JAN to MAY 2014 in an attempt to limit transmission of the virus.

According to health officials, this type of closure will continue annually for the next five years, pending evaluation of future need. Shanghai did not report cases of H7N9 during the closure. On 1 FEB, media reported Urumqi live bird market operations in Xinjiang province have been suspended until further notice.

Confirmed avian H7N9 has been rare and subclinical but has been identified in chickens, ducks, pigeons, and a wild tree sparrow. On 16 DEC 2014, H7N9 was reported in wild birds in Taiwan, although OIE confirmed further gene sequencing indicated this strain is different from the one found in China.

According to a study published in the Proceedings for the National Academy of Sciences on 26 NOV 2014, the origins of the H7N9 flu virus have been genetically linked to the co-circulation of H9N2 and other H7 flu viruses on chicken farms and in poultry markets. The observed recombination of H7 and N9 viruses enabled the virus to jump from wild fowl to domestic birds and eventually to humans in 2013.

Legend: Text updated from the previous report will be printed in red; items in (+xx) represent the change in number from the previous Summary (28 JAN 2015).

All information has been verified unless noted otherwise. Sources include the CDC, HHS, WHO, CHP, China CDC, Taiwan CDC, NPAS, FluTrackers, and Outbreak News Today.

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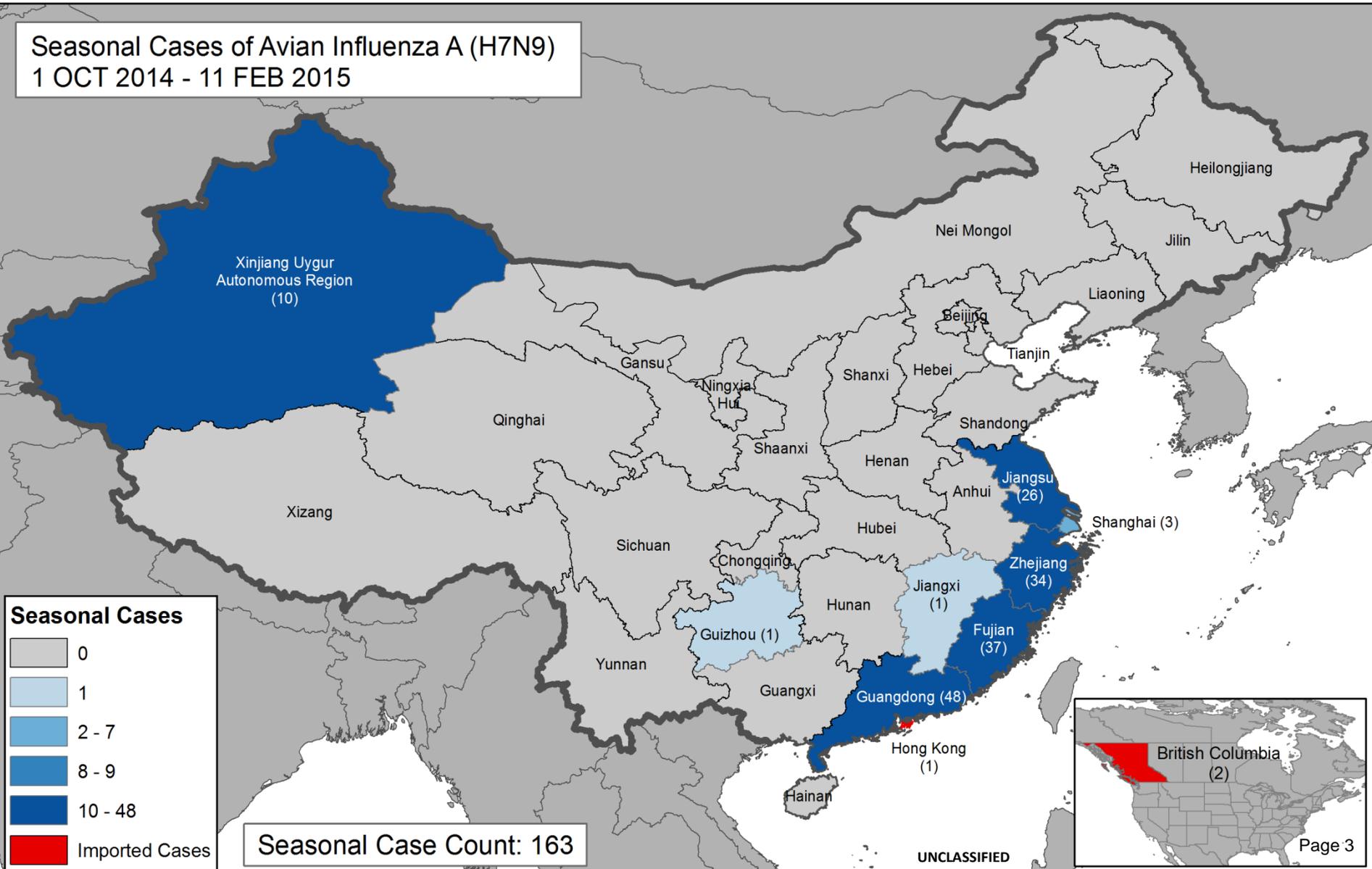
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Seasonal Cases of Avian Influenza A (H7N9)
1 OCT 2014 - 11 FEB 2015



Seasonal Cases

- 0
- 1
- 2 - 7
- 8 - 9
- 10 - 48
- Imported Cases

Seasonal Case Count: 163

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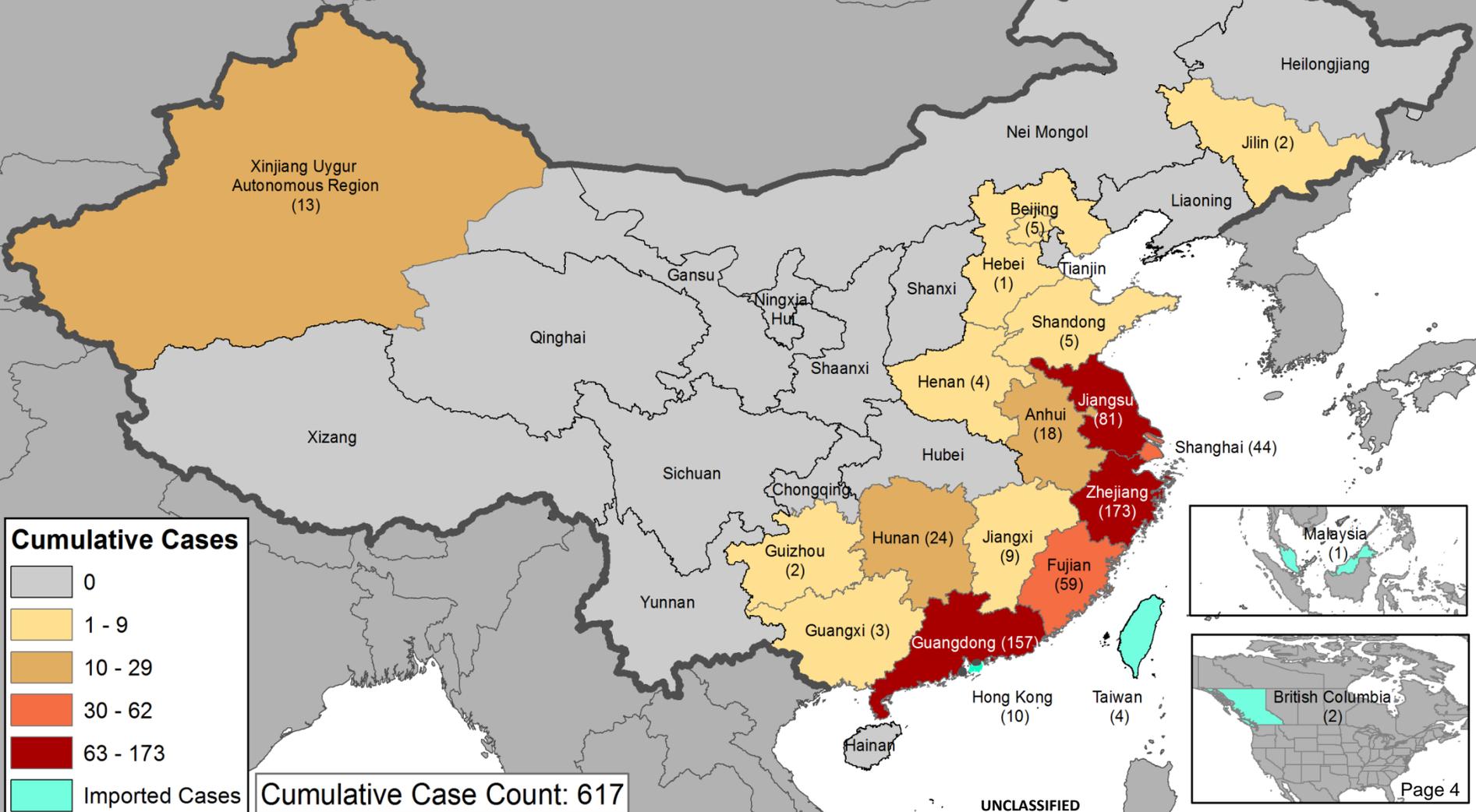
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Cumulative Cases of Avian Influenza A (H7N9)
1 APR 2013 - 11 FEB 2015

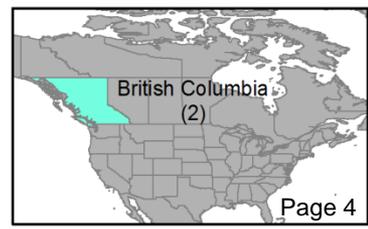
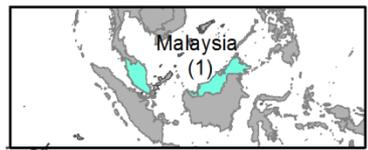


Cumulative Cases

- 0
- 1 - 9
- 10 - 29
- 30 - 62
- 63 - 173
- Imported Cases

Cumulative Case Count: 617

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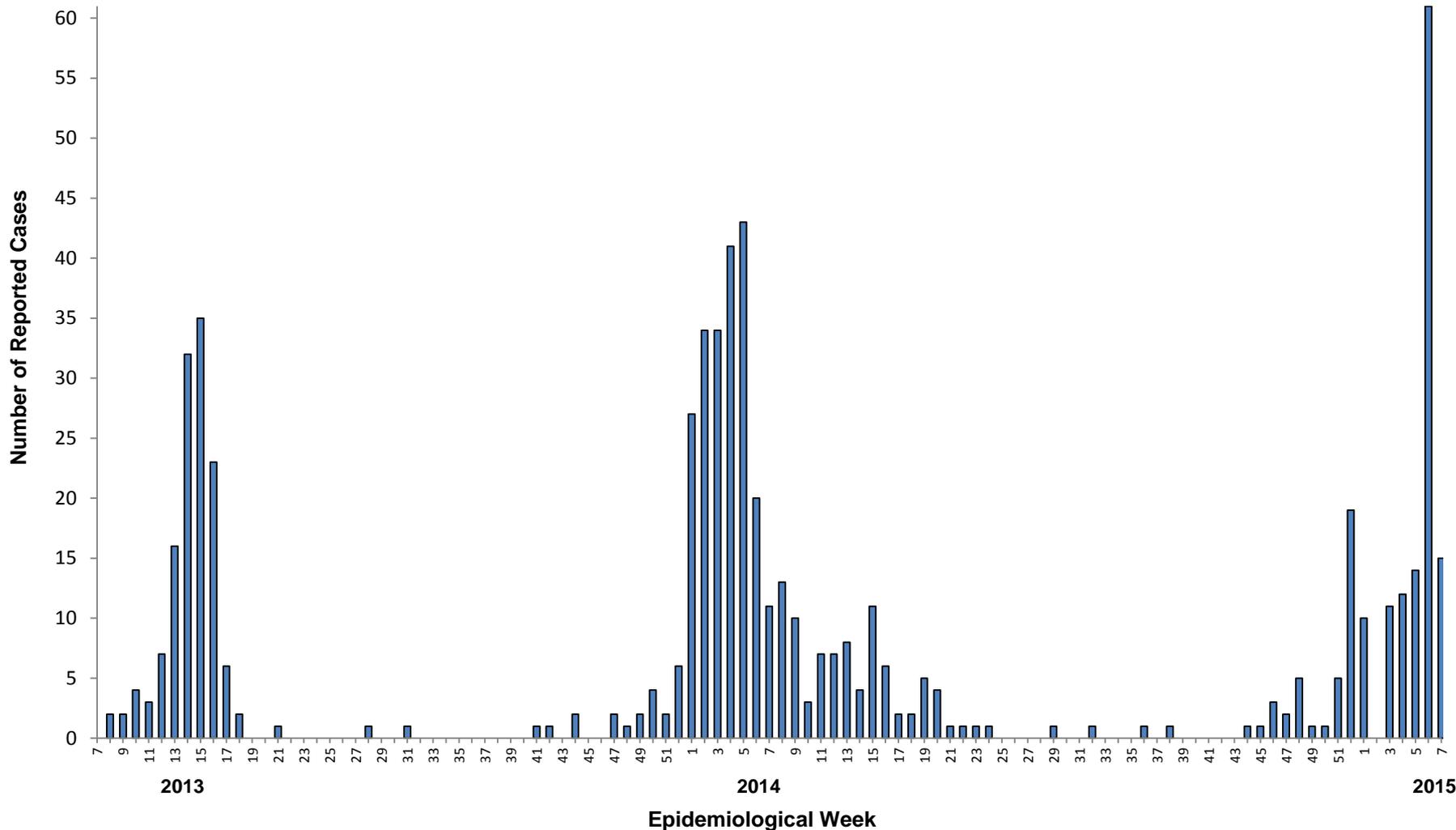
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Avian Influenza A (H7N9) Cases by Estimated Week of Onset As of 11 FEB 2015 (N=617)



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Additional Resources and Media Reports

H7N9 Web Sites

- [AFHSC Detecting and Reporting DOD Cases of Avian Influenza A \(H7N9\)](#)
- [WHO H7N9 Overview](#)
- [WHO Guidelines for H7N9 Post-Exposure Chemoprophylaxis of Close Contacts](#)
- [WHO Risk Assessment for Human Infection of H7N9](#)
- [CDC H7N9 Overview](#)
- [CDC H7N9 Case Definitions](#)
- [CDC H7N9 FAQs](#)
- [CDC H7N9 Risk Assessment](#)
- [CDC Travel Notice](#)
- [HHS EUA Declaration](#)

Information and News

- [Travel Alert for Guizhou Raised on H7N9 Report](#) (Focus Taiwan, 11 FEB 2015)
- [Latest WHO DON on H7N9](#) (WHO, 8 FEB 2015)
- [Urumqi Live Bird Market Operations Have Been Closed](#) (FluTrackers, 1 FEB, 2015)
- [Public Health Notice Update: H7N9 avian flu](#) (PHAC, 26 JAN 2015)
- [Hong Kong reports 12th imported H7N9 avian influenza case](#) (Outbreak News Today, 23 JAN 2015)
- [Avian Influenza A \(H7N9\) Virus Antibodies in Close Contacts of Infected Persons, China](#) (CDC, JAN 2015 – to be released 1 APR 2015)
- [Live Chickens Back on Sale in Hong Kong After Bird Flu Cull](#) (South China Morning Post, 11 JAN 2015)
- [Bird Flu in Hong Kong](#) (Reuters, 31 DEC 2014)
- [Mapping chicken flu virus offers clues about deadly H7N9 bird flu](#) (Medical News Today, 30 DEC 2014)
- [Unraveling H7N9's History](#) (Scientist, 30 DEC 2014)
- [OIE Report of H7N9 in Wild Birds in Taiwan](#) (OIE, 26 DEC 2014)
- [Article on Origins of H7N9](#) (PNAS, 26 NOV 2014)