



DEPARTMENT OF DEFENSE (AFHSC)

Avian Influenza A (H7N9) Surveillance Summary #46

28 JAN 2015



CASE REPORT: As of 28 JAN 2015, 533 (+27) cases of avian influenza A (H7N9) including 186 (+1) deaths have been reported in China, Hong Kong, Taiwan, Malaysia, and Canada.

On 23 JAN, the Hong Kong Center for Health Protection (CHP) reported one case of H7N9 in an individual returning from Guangdong, China on 19 JAN. On 26 JAN, the Public Health Agency of Canada (PHAC) reported a case of H7N9 in an individual returning to Canada from China on 12 JAN; this is the first documented case of H7N9 in a human in North America. This individual was not symptomatic during travel and only became ill after arrival in Canada. This confirmed case was traveling with a family member who also began exhibiting flu-like symptoms upon returning from China to Canada. This additional traveler did not require hospitalization, and the cause of illness has not yet been determined.

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 at www.afhsc.mil/home. 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: www.cdc.gov/flu/clsis. 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.

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 4** illustrates these ongoing seasonal trends for H7N9 cases.

The overall case-fatality proportion among known cases is 35%, the average age of those affected is 53 years, and at least 131 of the cases reported have been female. The most recent known date of onset was 19 JAN 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. Four cases identified in Taiwan are presumed to have become infected while traveling in Jiangsu. Twelve cases in Hong Kong, one in Malaysia, and one in Canada are thought to have been imported from China. Most imported cases specifically reported recent travel to the Guangdong Province.

At least seven 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. Of note, Shanghai did not report cases of H7N9 during the closure and has only reported one case since last year's bird market closure. Confirmed avian H7N9 has been rare and subclinical but has been identified in chickens, ducks, pigeons, and a wild tree sparrow.

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.

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. CDC and WHO advise no special screenings at points of entry, and no trade or travel restrictions. WHO also published [guidelines for H7N9 post-exposure chemoprophylaxis of close contacts](#) and updated their [risk assessment](#) for human infection of H7N9 on 2 OCT 2014. The CHP encourages avoiding poultry, wild birds, and their droppings, and advises the public to continue to avoid live poultry markets and farms.

Legend: Text updated from the previous report will be printed in red; items in (+xx) represent the change in number from the previous Summary (15 JAN 2015).

All information has been verified unless noted otherwise. Sources include the CDC, HHS, WHO, CHP, Chinese CDC, and NPAS.
For questions or comments, please contact: usarmy.ncr.medcom-afhsc.list.dib.alert-response@mail.mil

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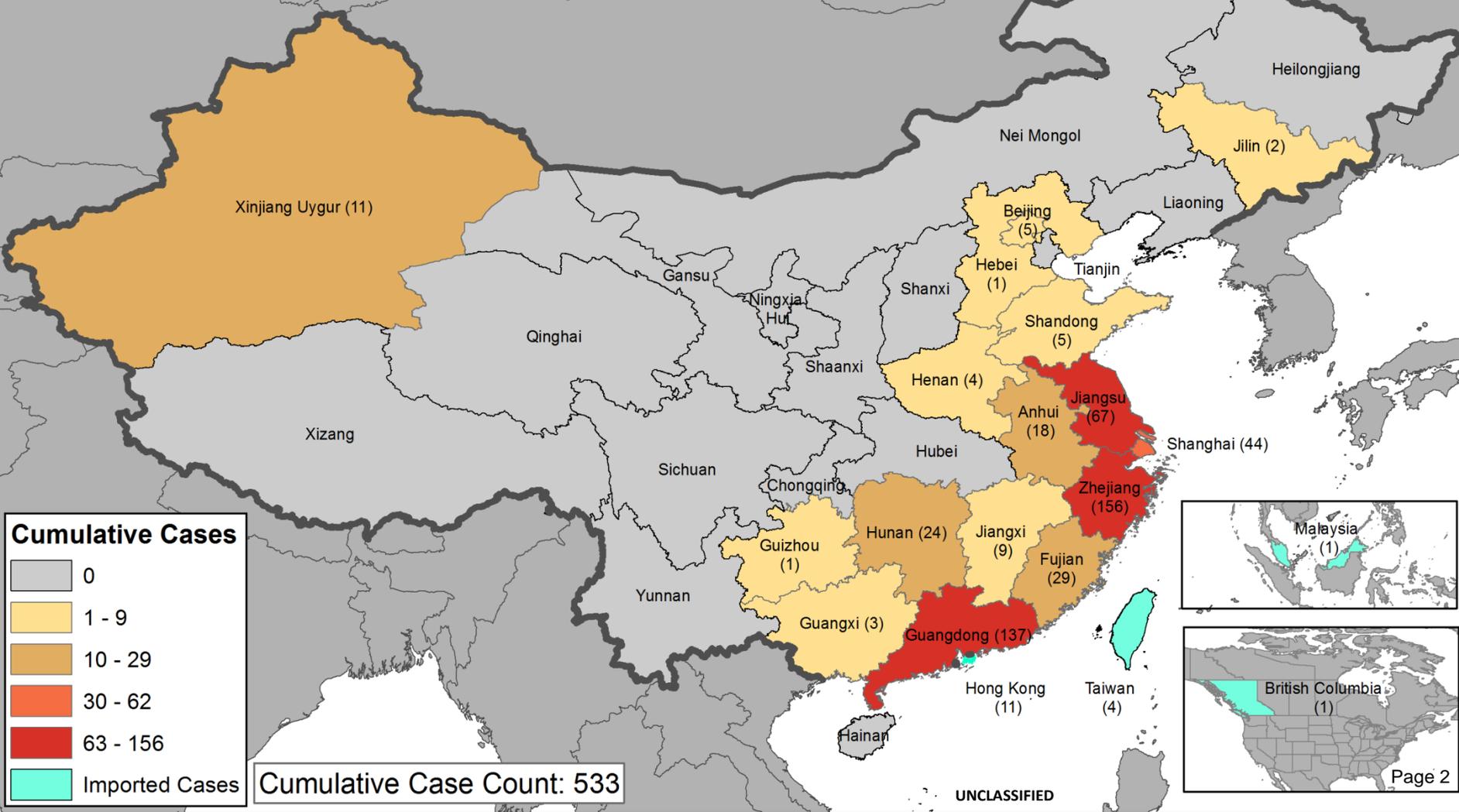
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Cumulative Cases of Avian Influenza A (H7N9)
1 APR 2013 - 28 JAN 2015



Cumulative Cases

- 0
- 1 - 9
- 10 - 29
- 30 - 62
- 63 - 156
- Imported Cases

Cumulative Case Count: 533

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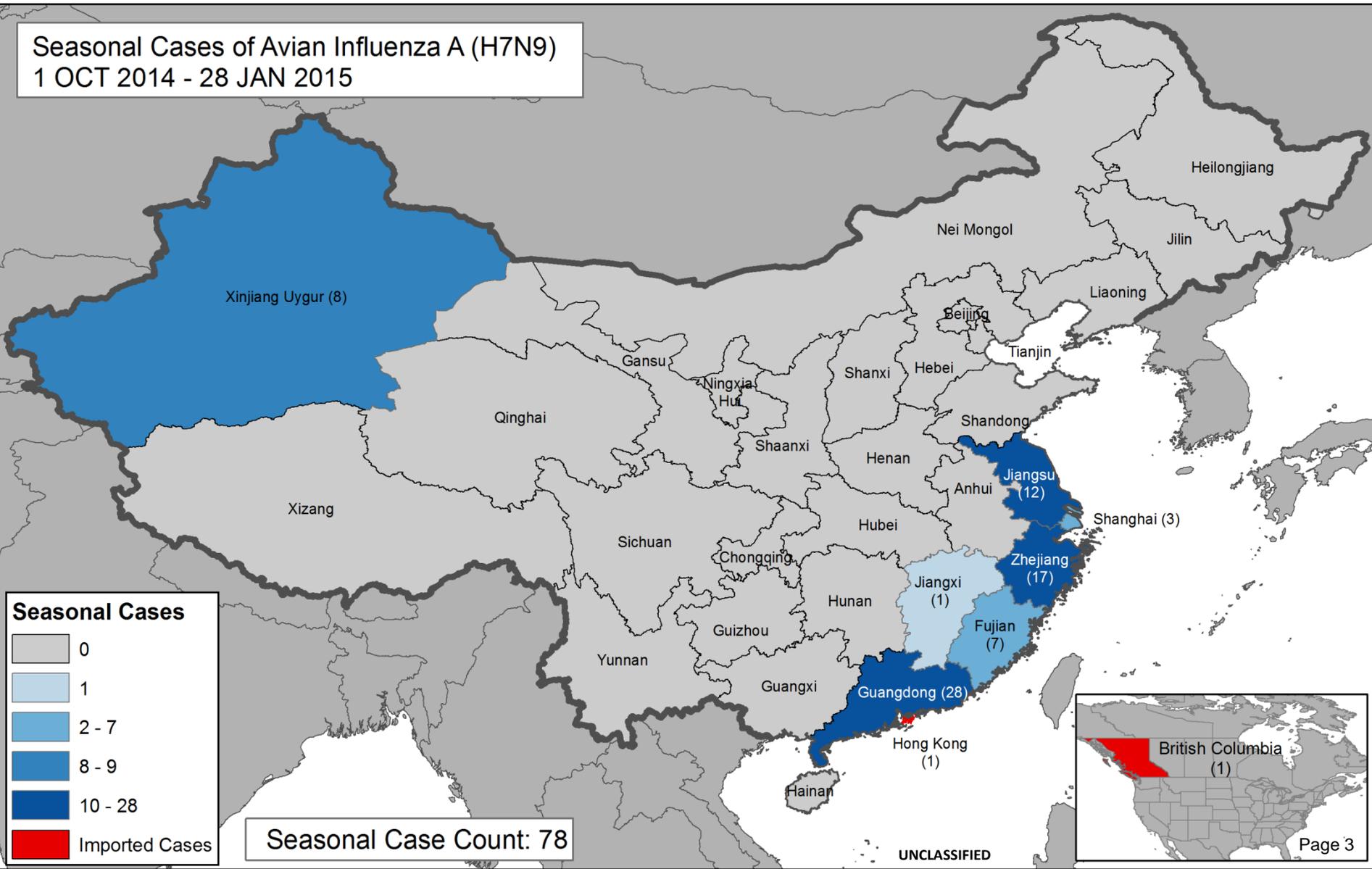
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Seasonal Cases of Avian Influenza A (H7N9)
1 OCT 2014 - 28 JAN 2015



Seasonal Case Count: 78

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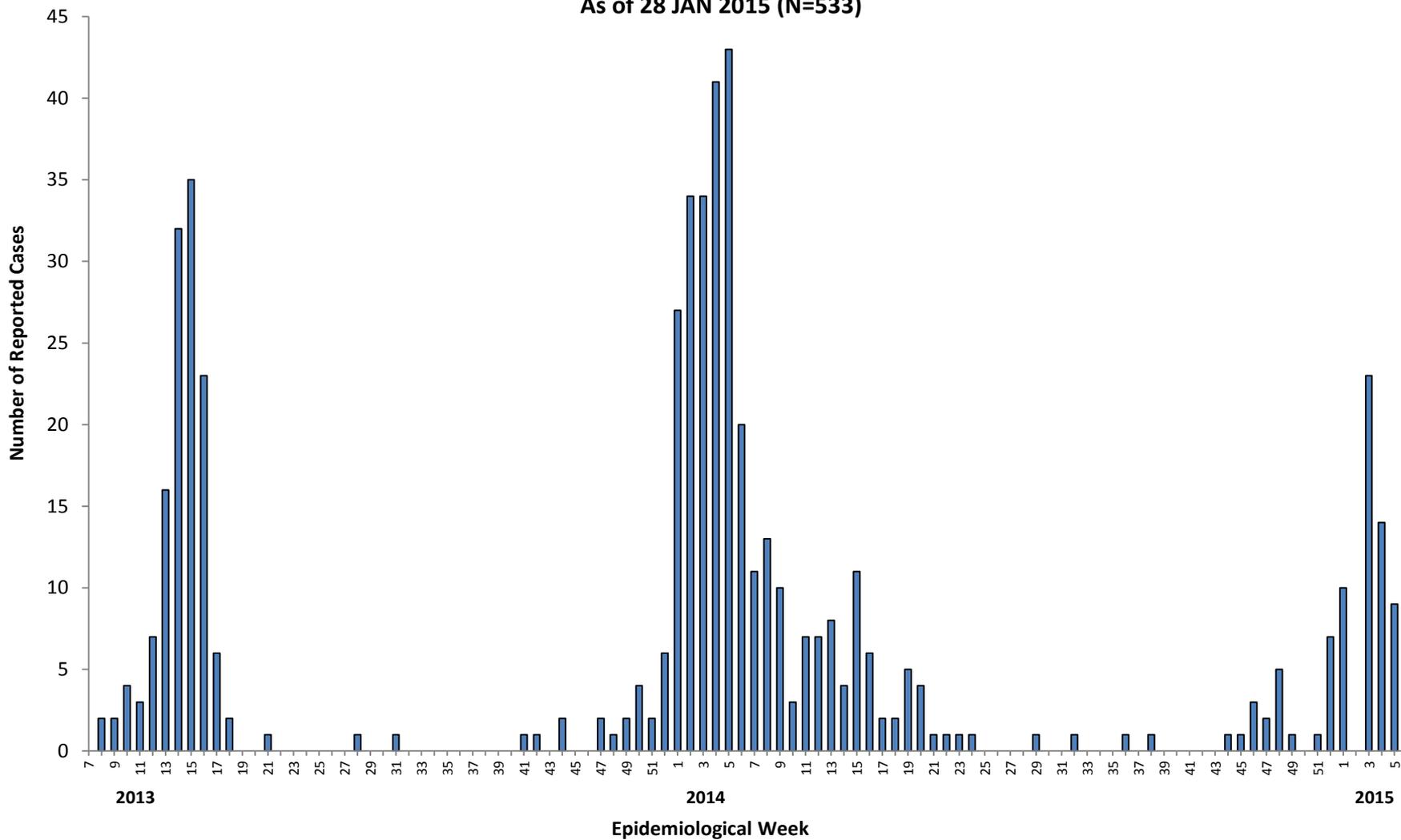
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28 JAN 2015



Avian Influenza A (H7N9) Cases by Estimated Week of Onset
As of 28 JAN 2015 (N=533)



For questions or comments, please contact: usarmy.ncr.medcom-afhsc.list.dib.alert-response@mail.mil

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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](#)
- [CDC H7N9 Overview](#)
- [CDC H7N9 Case Definitions](#)
- [CDC H7N9 FAQs](#)
- [CDC H7N9 Risk Assessment](#)
- [HHS EUA Declaration](#)

Information and News

- [Latest WHO DON on H7N9](#) (WHO, 27 JAN 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)
- [Article on Origins of H7N9](#) (PNAS, 26 NOV 2014)
- [WHO H7N9 Risk Assessment](#) (WHO, 2 OCT 2014)