

***Ad hoc Clinical Infection & Public Health
Forum: Avian Influenza A (H7N9)
Epidemiology***



Influenza A(H7N9)

- Influenza A H7 viruses are a group of influenza viruses that normally circulate among birds
- Influenza A(H7N9) virus is one subgroup among the larger group of H7 viruses
- Some H7 viruses (H7N2, H7N3 and H7N7) have occasionally been found to infect humans, no human infections with H7N9 viruses have been reported until recent reports from China

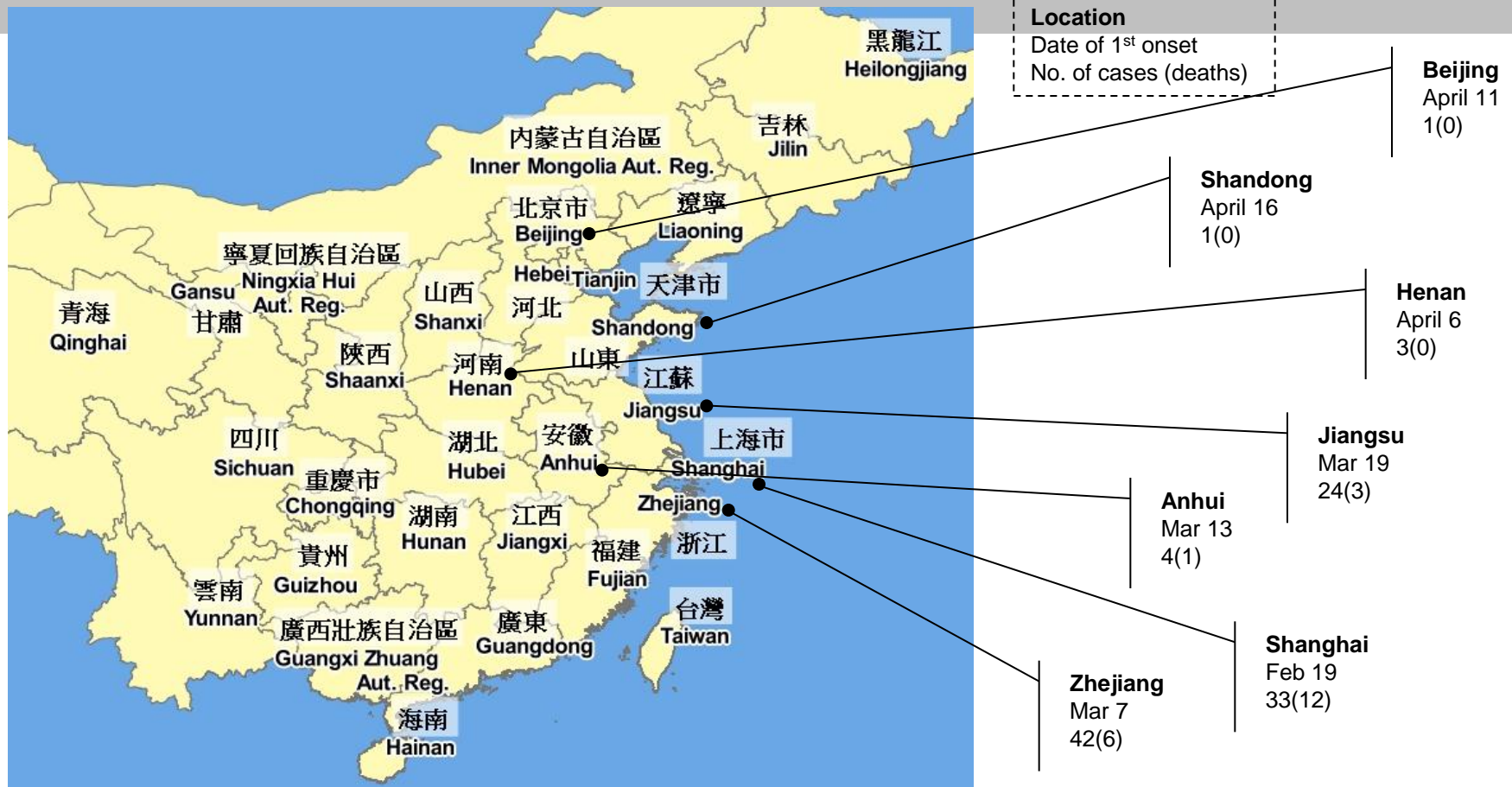
Confirmed cases of human infection with avian influenza A(H7N9) as of 23 Apr 2013

- 108 cases have been laboratory confirmed with influenza A(H7N9) virus in China, including 22 deaths
- 33 from Shanghai (12 fatal), 4 from Anhui(1 fatal), 24 from Jiangsu(3 fatal), 42 from Zhejiang (6 fatal), 1 from Beijing, 3 from Henan, 1 from Shandong
- Age ranged from 2 - 91 years old
- Male: Female 72:32 (2.25:1)

Confirmed cases of human infection with avian influenza A(H7N9) as of 23 Apr 2013

Province / Municipality	Cumulative count	No. of deaths	First case onset date	Latest case onset date
Shanghai	33	12	19/02/2013	13/04/2013
Zhejiang	42	6	07/03/2013	16/04/2013
Anhui	4	1	15/03/2013	14/04/2013
Jiangsu	24	3	19/03/2013	13/04/2013
Henan	3	0	06/04/2013	08/04/2013
Beijing	1	0	11/04/2013	11/04/2013
Shandong	1	0	15/04/2013	16/04/2013
Total	108	22		

Geographical Distribution of Confirmed H7N9 Cases as of 23 Apr 2013



Order of onset: **Shanghai -> Zhejiang -> Anhui**
-> Jiangsu -> Henan -> Beijing -> Shandong

A novel reassortant avian influenza virus A (H7N9)



2 genes coding for HA and NA seem to come from avian H7N9 viruses

6 genes coding for the internal proteins seem to come from avian H9N2 viruses

Latest risk assessment by the National Health and Family Planning Commission

- H7N9 virus is of avian origin and people are mainly infected through exposure to infected poultry or its contaminated environment
- Contact with infected poultry or **visiting wet markets** with live poultry are important risk factors of human infection caused by the avian influenza A(H7N9) virus

Prevention and Control Measures



Enhanced Surveillance

- Influenza A (H7N9) has been made a statutorily notifiable disease
- Worked with Hospital Authority and private hospitals to enhance surveillance and laboratory testing for H7 virus and enhance diagnostic service capacity

Reporting criteria

- An individual fulfilling both the Clinical Criteria **AND** Epidemiological Criteria should be reported to CHP for further investigation.

Clinical Criteria

- Patient with
 - influenza-like-illness (fever $>38^{\circ}\text{C}$ with cough or sore throat);
OR
 - person with severe pneumonia;
OR
 - person died of unexplained acute respiratory illness.

Reporting criteria: Epidemiological

One or more of the following exposures in the 7 days prior to symptom onset:

- contact with a **human case** of influenza A (H7N9);
OR
- contact with **poultry or wild birds or their remains or to environments contaminated by their faeces** in *countries/areas with documented avian influenza A (H7N9) infection in birds and/or humans in the recent 6 months;*
OR
- consumption of **raw or undercooked poultry products** *in countries/areas with documented avian influenza A(H7N9) infection in poultry and/or humans in the recent 6 months,*
OR
- close contact with a **confirmed influenza A(H7N9) infected animal** other than poultry or wild birds;
OR
- worked in a **laboratory** that is processing samples from persons or animals that are suspected from avian influenza infection

Means of notification

- HA hospitals
 - NDORS
- To Central Notification Office of CHP via
 - Fax 2477 2770
 - Phone 2477 2772
 - CENO On-line (www.chp.gov.hk/ceno)
- Please contact Medical Control Officer (MCO) of the Department of Health (DH) when reporting any suspected case
 - Pager 7116 3300 call 9179

Liaison with other health authorities

- Maintained close liaison with WHO, Mainland and overseas health authorities to monitor the latest development.
- Experts from HA, CHP and University of Hong Kong visited Shanghai on exchange of experience on diagnosis and treatment.

Enhanced Port Health Measures

- Random temperature checks on travelers, using hand-held temperature devices.
- Enhanced public health education at all boundary control points (e.g. posters, leaflets, in-flight broadcast of health messages).
- Regular updates to tourism industry and relevant government departments through meetings and correspondences.

Prompt isolation and testing of suspected cases

- Bundled approach in managing suspected cases:
 - Immediately isolation
 - Notification to CHP for epidemiological investigation
 - Laboratory test by hospital and CHP

Infection Control in Healthcare Settings, Elderly Homes and Schools

- Collaborated with HA and private healthcare sectors for referral of suspected cases
- Urged all private hospitals to enhance preparedness, e.g. review and update of infection control guidelines and contingency plans, ensure sufficient stock of personal protective equipment.
- Arranged briefings and training on infection control measures.
- Written to elderly homes and schools to urge them to enhance preparedness and hygiene measures.

Enhanced Risk Communication

- Interdepartmental meeting for preparedness and response action
- Press release, public announcement and press conference on update of disease and health advice
- Daily dissemination of the latest number of suspected human cases of avian influenza A(H7) notified to the CHP (fulfilling and not fulfilling reporting criteria) through press release

Publicity and Public Education

- Public health education on personal hygiene, and environmental hygiene, especially washing hands
- Dedicated page on CHP website
- Communication plan in HA: staff forum, information corners, website

Cleansing of public places

- Food and Environmental Hygiene Department, Housing Department and other relevant departments have strengthened the day-to-day cleansing in public places.

Monitoring of poultry and birds

- The Government is conducting H7 virus testing on samples in local chicken farms, poultry wholesale markets and poultry retail outlets, and on all dead wild birds.

Thank you