

<b>To:</b>	BC MHOs, PHNLs, ICPs, ERDOCs, IDSPEC, MEDMICRO, AMBULANCE, BCCDC Internal Groups, National Partners
<b>Subject:</b>	<b>March 5, 2014</b> – Avian Influenza Update
<b>Purpose:</b>	Heightened clinician awareness
<b>Action required:</b>	Yes
<b>Recommendations:</b>	Enhanced vigilance, notification and infection control by clinicians in response to cases of severe acute respiratory illness (SARI) with links to affected areas in the two weeks prior to symptom onset

\*\*\* Please share with your workplace colleagues as appropriate. \*\*\*

Dear Colleagues –

Below is an update on avian influenza A(H7N9) trends in recent weeks. Although detections during the second wave have decreased substantially since our last bulletin to you on 7 February 2014, further human cases of A(H7N9) are anticipated, particularly considering that the first wave of activity in 2013 peaked during March-April. In addition, since our last update a third human case of avian influenza A(H10N8) was reported from China for which we also provide details below.

### 1. H7N9 UPDATE [Total: 383 cases; Deaths: 116], China

As previously reported to you, China has experienced a second-wave surge of human H7N9 cases since October 2013, with the number of second-wave cases reaching 247 (as of 5 March 2014), almost double the number reported during the first wave of the outbreak from February to May 2013 (n=134) (see attached Epidemic Curve).

However, the number of reported cases has waned in recent weeks, suggesting that the second-wave peak occurred around mid-January 2014. The reasons for this decline are unclear and may be multi-factorial including the effects of live poultry market closures in some provinces or in association with the Lunar New Year holiday, other infection prevention and control measures, reporting delay and/or the contribution of seasonality. To date, 51 cases with onset in February 2014 (average: 10 per week) have been reported compared to 170 cases with onset in January 2014 (average: 35-40 per week). However, given an incubation period of up to 10 days and associated reporting delays, more case reports are anticipated in the coming weeks and ongoing monitoring remains important notwithstanding hopeful signs of decline.

Cumulatively to date (as of 5 March 2014), 383 cases and 116 deaths due to this novel H7N9 virus have been reported (case fatality: 30%). This total number of cases includes travel-related cases reported from Taiwan (2), Hong Kong (6), and Malaysia (1). To date, 15 provinces or municipalities in south-eastern China have been affected. On 21 February 2014, Jilin Province, the northernmost affected province to date, located northeast of Beijing and bordering North Korea and Russia (see attached Map), reported its first H7N9 case in a poultry farm worker. Earlier in February, the first human case detected outside of China was reported by Malaysia in a Chinese citizen from Guangdong Province who developed symptoms prior to travel. This week, a sixth travel-related case was reported by Hong Kong in a young child with travel in Guangdong Province during the exposure period. These latest travel-related H7N9 cases, along with the recent importation of an H5N1 case in Canada, although rare, highlight the potential for cases outside of affected areas in China.

The majority of H7N9 cases have presented with severe respiratory illness, leading to pneumonia or respiratory failure. A few mild cases, mostly in children who recovered from their illness, and at least one asymptomatic case have been detected. Although the majority of severe cases have occurred in older, adult men, this past week, two cases were reported in children <10 years of age who are currently hospitalized in severe condition in Zhejiang Province. The majority of cases have reported a history of exposure to poultry or live poultry markets, suggesting that the most likely transmission scenario is one of a zoonotic epidemic with sporadic transmission to humans in close contact with the animal reservoir. Almost all cases have occurred sporadically, and there is no evidence of sustained human-to-human

transmission. At this time, the risk due to H7N9 is considered low. However, given the severity and pandemic potential of H7N9 and other novel avian influenza subtypes, ongoing close monitoring and enhanced vigilance are warranted.

To stay current with ongoing developments, please consult the WHO avian influenza A(H7N9) page: [www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/en/index.html](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/en/index.html).

For useful risk assessment by ECDC related to human infections with avian influenza A viruses in China see: [http://www.ecdc.europa.eu/en/press/news/\\_layouts/forms/News\\_DispForm.aspx?List=8db7286c-fe2d-476c-9133-18ff4cb1b568&ID=959](http://www.ecdc.europa.eu/en/press/news/_layouts/forms/News_DispForm.aspx?List=8db7286c-fe2d-476c-9133-18ff4cb1b568&ID=959)

and for a pdf of ECDC's most recent Rapid Risk Assessment see: <http://www.ecdc.europa.eu/en/publications/Publications/avian-flu-china-rapid-risk-assessment-26022014.pdf>

## **2. H10N8 UPDATE [Total: 3 cases; Deaths: 2], China**

On 13 February 2014, a second fatal case and the third human case in total since December 2013 of avian influenza A(H10N8) was reported from Jiangxi, China. The patient was an elderly adult male with underlying chronic disease who had exposure to live poultry. While human infections with other H10 subtypes, notably H10N7, have been reported previously, these cases are the first H10N8 infections to be reported in humans. All 3 cases have been reported from Jiangxi Province in China and do not appear to be epidemiologically linked. Detection of these human cases likely reflects enhanced surveillance efforts in China related to the ongoing H7N9 outbreak.

## **3. ACTION AND ADVICE [abbreviated]**

In the event of severe acute respiratory illness (SARI) in a patient with links to affected areas in the two weeks prior to symptom onset (i.e. residence, travel history or contact with someone with such history), clinicians should notify their local health authority/Medical Health Officer.

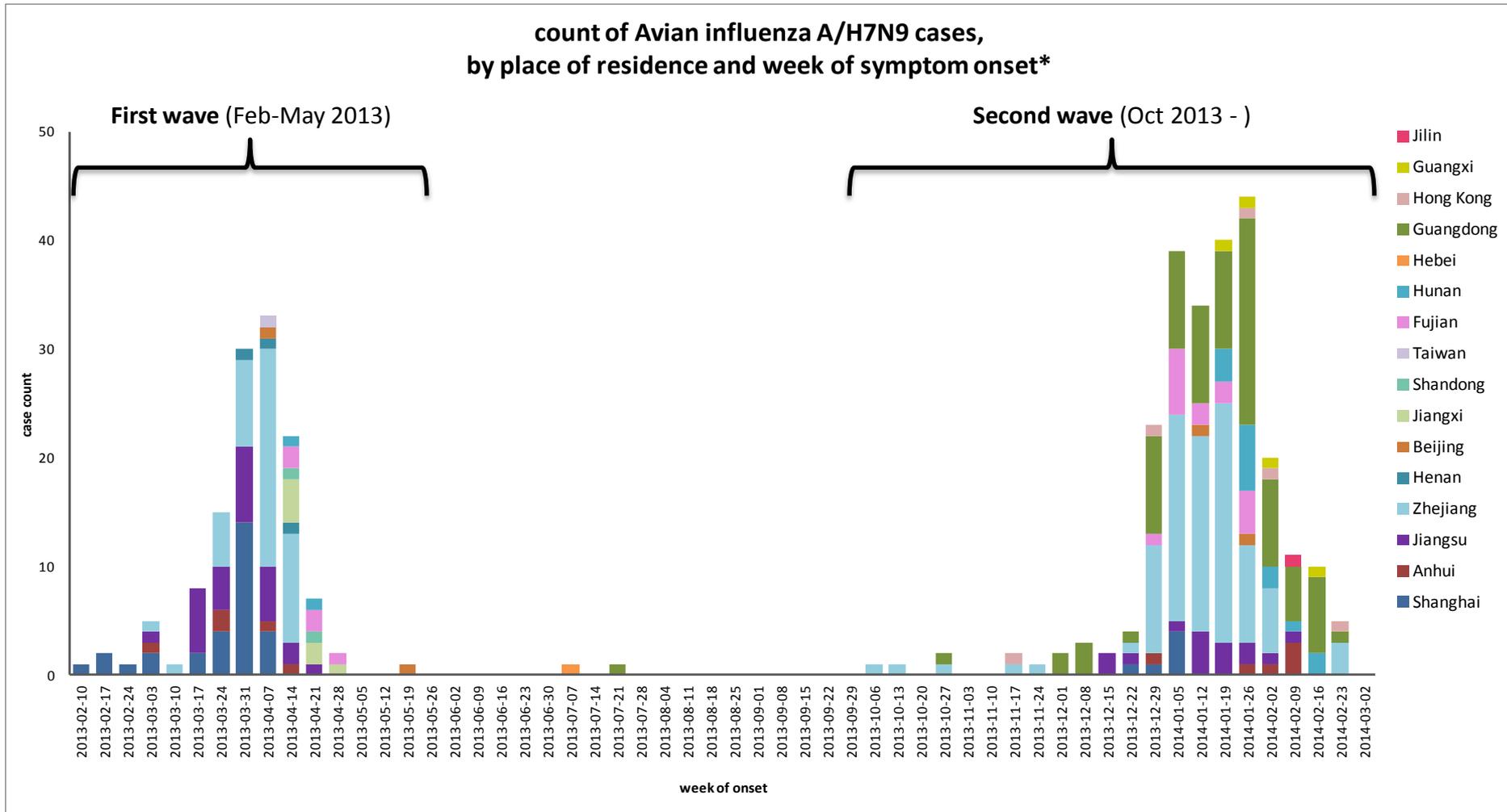
Health care workers should implement respiratory precautions immediately, and cases should be managed in respiratory isolation with contact and droplet precautions. Aerosol-generating procedures may facilitate spread warranting airborne precautions. Given a spectrum of illness inclusive of milder or atypical presentations, clinicians are encouraged to use their judgement and/or consult infection control for guidance around enhanced measures where the index of suspicion (e.g. based on contact, comorbidity or clustering history) and exposure risk may be higher.

For diagnostic testing for suspected novel influenza viruses, please discuss with your local health authority/Medical Health Officer and consult a virologist or microbiologist at the BC Public Health Microbiology & Reference Laboratory (PHMRL) to arrange advance notification and direct shipping. Lower respiratory specimens (e.g., sputum, endotracheal aspirate, or bronchoalveolar lavage) are recommended, where possible and clinically indicated. Follow strict infection prevention and control guidelines when collecting respiratory specimens.

To review prior bulletins issued by the BCCDC Influenza & Emerging Respiratory Pathogens team, see: <http://www.bccdc.ca/dis-cond/DiseaseStatsReports/EmergingRespiratoryVirusUpdates.htm>

Influenza & Emerging Respiratory Pathogens  
BC Centre for Disease Control

# H7N9 Epidemic Curve



\*Does not include: 1 Henan, 5 Jiangsu, 1 Guangdong, and 1 Guizhou cases with unknown onset date; one asymptomatic case in Beijing.

# H7N9 avian influenza first and second wave cases by province of residence as of March 5<sup>th</sup>, 2014

1<sup>st</sup> wave  
(Feb-May 2013)



2<sup>nd</sup> wave  
(Oct 2013- present)

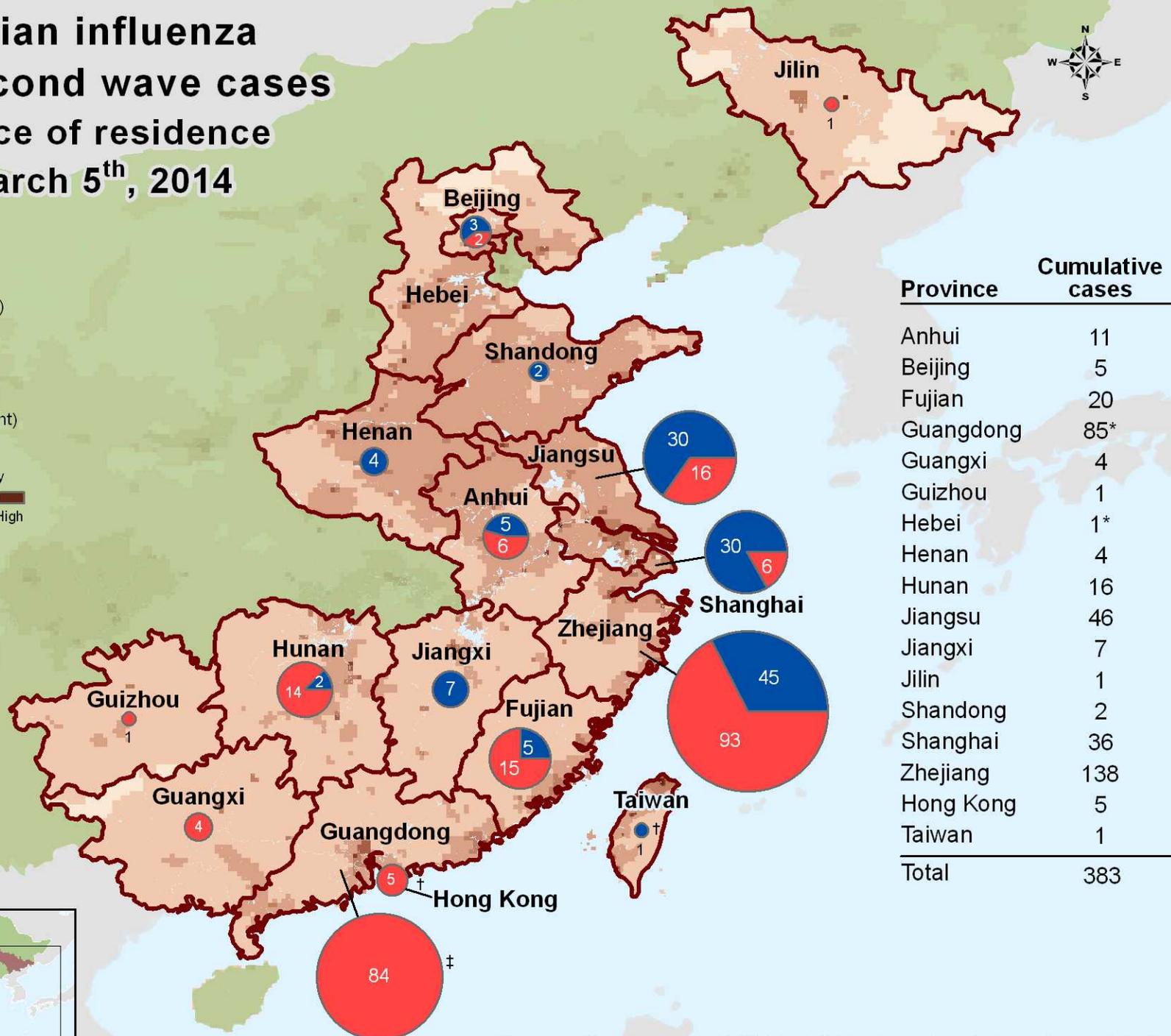


Population Density



Low High

Waterbodies

0 60 120 240 360 480 600 Kilometers

\* Two cases with symptom onset in July 2013 (one in Hebei and one in Guangdong) are not represented on the map.  
 † Cases reported travel to mainland China during exposure period.  
 ‡ One case residing (and apparently exposed) in Guangdong was identified during travel to Malaysia, where the case was reported and remains hospitalised.  
 Data compiled from ProMed, GPHIN alerts and other public reports. Map created March 5<sup>th</sup>, 2014 by BCCDC.