

Influenza at the human-animal interface

Summary and assessment, 17 January to 14 February 2017

- **New infections¹:** Since the previous update, new human infections with influenza A(H7N9) and A(H1N1)v viruses were reported.
- **Risk assessment:** The overall public health risk from currently known influenza viruses at the human-animal interface has not changed, and the likelihood of sustained human-to-human transmission of these viruses remains low. Further human infections with viruses of animal origin are expected.
- **IHR compliance:** All human infections caused by a new influenza subtype are required to be reported under the International Health Regulations (IHR, 2005).² This includes any animal and non-circulating seasonal influenza viruses. Information from these notifications is critical to inform risk assessments for influenza at the human-animal interface.

Avian Influenza Viruses

Avian influenza A(H5) viruses

Current situation:

Since the last update, no new laboratory-confirmed human cases of influenza A(H5) virus infection were reported to WHO. Influenza A(H5) subtype viruses have the potential to cause disease in humans and thus far, no human cases, other than those with influenza A(H5N1) and A(H5N6) viruses, have been reported to WHO. According to reports received by the World Organisation for Animal Health (OIE), various influenza A(H5) subtypes continue to be detected in birds in West Africa, Europe and Asia. There have also been numerous detections of influenza A(H5N8) viruses in wild birds and domestic poultry in several countries in Africa, Asia and Europe since June 2016. For more information on the background and public health risk of these viruses, please see the WHO assessment of risk associated with influenza A(H5N8) virus [here](#).

Avian influenza A(H7N9) viruses

Current situation:

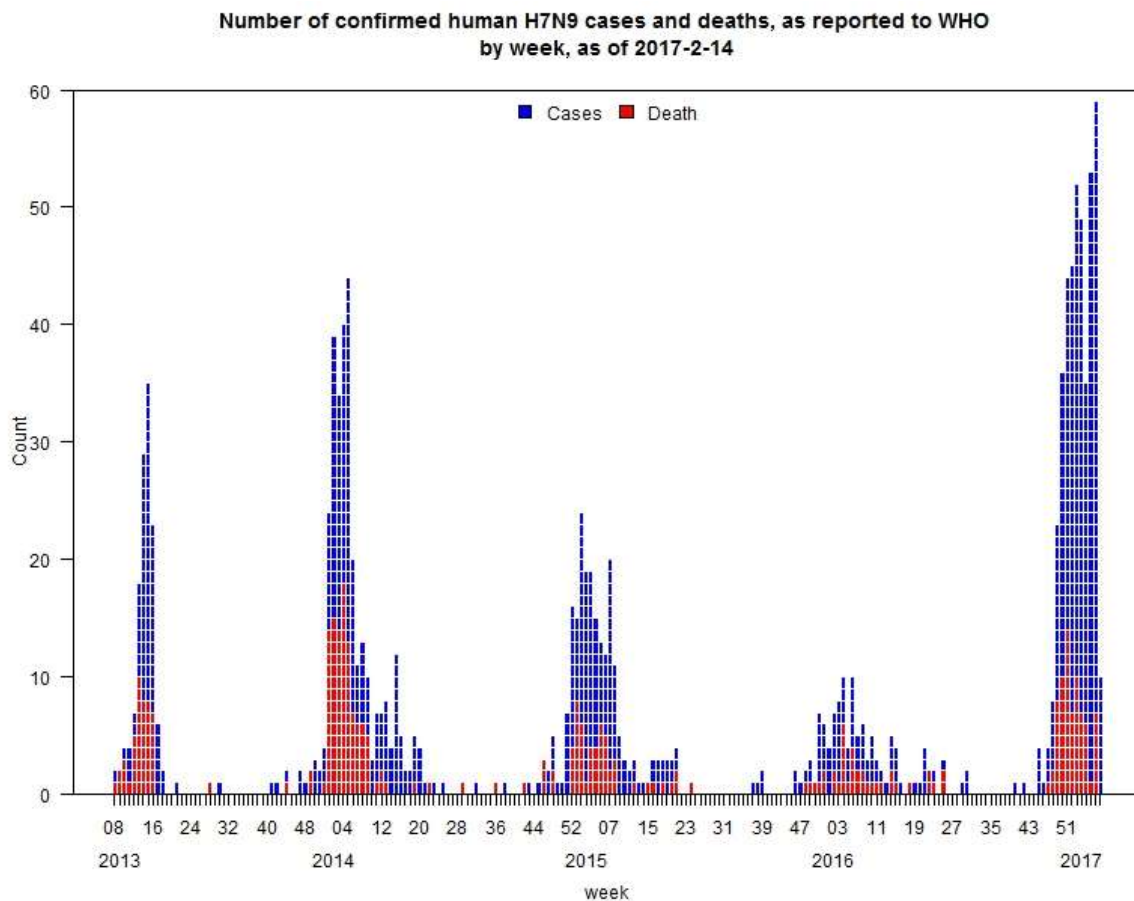
During this reporting period, 305 laboratory-confirmed human cases of influenza A(H7N9) virus infection were reported to WHO from China. Case details are presented in the table in the Annex of this document. For additional details on these cases and public health interventions, see the [Disease Outbreak News](#), and for analysis of recent scientific information on the A(H7N9) influenza virus, please see a recent WHO publication [here](#).

¹ For epidemiological and virological features of human infections with animal influenza viruses not reported in this assessment, see the yearly report on human cases of influenza at the human-animal interface published in the Weekly Epidemiological Record. www.who.int/wer/en/

² World Health Organization. Case definitions for the four diseases requiring notification in all circumstances under the International Health Regulations (2005). www.who.int/ihr/Case_Definitions.pdf

As of 14 February 2017, a total of 1223 laboratory-confirmed cases of human infection with avian influenza A(H7N9) viruses, including at least 380 deaths³, have been reported to WHO (Figure 2). According to reports received by the Food and Agriculture Organization (FAO) on surveillance activities for avian influenza A(H7N9) viruses in China⁴, positives among virological samples continue to be detected mainly from live bird markets, vendors and some commercial or breeding farms.

Figure 1: Epidemiological curve of avian influenza A(H7N9) cases in humans by week of onset, 2013-2017



Risk Assessment:

- 1. What is the likelihood that additional human cases of infection with avian influenza A(H7N9) viruses will occur?** Most human cases are exposed to the A(H7N9) virus through contact with infected poultry or contaminated environments, including live poultry markets. Since the virus continues to be detected in animals and environments, further human cases can be expected. Additional sporadic human cases of influenza A(H7N9) in other provinces in China that have not yet reported human cases are also expected.
- 2. What is the likelihood of human-to-human transmission of avian influenza A(H7N9) viruses?** Even though small clusters of cases have been reported, including those involving healthcare workers, current epidemiological and virological evidence suggests that this virus has not acquired the ability of sustained transmission among humans, thus the likelihood is low.

³ Total number of fatal cases is published on a monthly basis by China National Health and Family Planning Commission.

⁴ Food and Agriculture Organization. H7N9 situation update.

www.fao.org/ag/againfo/programmes/en/empres/H7N9/situation_update.html

- 3. What is the risk of international spread of avian influenza A(H7N9) virus by travellers?** Should infected individuals from affected areas travel internationally, their infection may be detected in another country during travel or after arrival. If this were to occur, further community level spread is considered unlikely as this virus has not acquired the ability to transmit easily among humans.

Swine Influenza Viruses

Current situation:

Influenza A(H1N1)v viruses

A report of a case of human infection with a swine influenza A(H1N1)v virus in Italy was published in the journal Eurosurveillance on 2 Feb 2017.[1] The patient is a male in his 40's with underlying conditions (obesity) who developed a severe acute distress respiratory syndrome in October 2016. The case sought medical care four days after illness onset and was then hospitalized with a diagnosis of bilateral pneumonia. His clinical condition quickly deteriorated and he was mechanically ventilated and received extracorporeal membrane oxygenation. A nasal swab sample and a lower respiratory tract sample were collected and were positive for influenza A virus antigen and oseltamivir treatment was initiated. The patient recovered and was discharged from hospital one month later. According to information provided by Italian health authorities, the patient had contact with pigs on a pig farm. Investigation is ongoing, including the exposure history of this case and further information will be published duly.

Virological investigations carried out on the pig farm during mid-October 2016 showed an absence of clinical signs in the animals, but nasal swabs collected from twelve weaning pigs tested positive by PCR for influenza A.

The genome of the virus isolated from this human case was eventually fully sequenced and the results indicated that the virus was of swine origin. Phylogenetic analysis indicated that the virus was closely related to the European avian-like swine influenza A(H1N1) viruses circulating in swine populations in Italy in recent years.

On 1 February 2017, Switzerland informed WHO of a case of human infection with a swine influenza A(H1N1) virus. The case is a male farm worker, aged 23, living in Switzerland. On 20 December 2016, he presented with mild acute respiratory symptoms 48 hours before a nasopharyngeal swab was collected. The virus isolated from this human case was fully sequenced and was closely related to the European avian-like swine influenza A(H1N1) viruses circulating in swine in Europe. Samples from the swine at the farm where the case worked also tested positive for influenza A(H1N1) viruses, and are currently under characterization. No additional human cases related to this event were reported. Human cases infected with swine influenza viruses have been detected in Switzerland in 2003, 2009, 2010 and 2011. Swine influenza A(H1N1) viruses are endemic in pig populations and circulate among swine in many regions of the world.

Risk Assessment:

- 1. What is the likelihood that additional human cases of infection with swine influenza viruses will occur?** Influenza A(H1N1) viruses circulate in swine populations in many regions of the world. Depending on geographic location, the genetic characteristics of these viruses differ. Most human cases are exposed to the swine influenza viruses through contact with infected swine or contaminated environments. Human infection tends to result in mild clinical illness, although some cases have been hospitalized with more severe disease and one fatal case has been reported from the United States of America. Since these viruses continue to be detected in swine populations around the world, further human cases can be expected.
- 2. What is the likelihood of human-to-human transmission of swine influenza viruses?** To date, no confirmed case clusters have been reported. Current evidence suggests that these viruses have not acquired the ability of sustained transmission among humans, thus the likelihood is low.
- 3. What is the risk of international spread of swine influenza viruses by travellers?** Should infected individuals from affected areas travel internationally, their infection may be detected in another country during travel or after arrival. If this were to occur, further community level spread is considered unlikely as this virus has not acquired the ability to transmit easily among humans.

Overall Risk Management Recommendations:

- WHO does not advise special traveller screening at points of entry or restrictions with regard to the current situation of influenza viruses at the human-animal interface. For recommendations on safe trade in animals from countries affected by these influenza viruses, refer to OIE guidance.
- WHO advises that travellers to countries with known outbreaks of animal influenza should avoid farms, contact with animals in live animal markets, entering areas where animals may be slaughtered, or contact with any surfaces that appear to be contaminated with animal faeces. Travellers should also wash their hands often with soap and water. Travellers should follow good food safety and good food hygiene practices.
- Due to the constantly evolving nature of influenza viruses, WHO continues to stress the importance of global surveillance to detect virological, epidemiological and clinical changes associated with circulating influenza viruses that may affect human (or animal) health. Continued vigilance is needed within affected and neighbouring areas to detect infections in animals and humans. As the extent of virus circulation in animals is not clear, epidemiological and virological surveillance and the follow-up of suspected human cases should remain high.
- All human infections caused by a new influenza subtype are notifiable under the International Health Regulations (IHR, 2005).⁵ State Parties to the IHR (2005) are required to immediately notify WHO of any laboratory-confirmed⁶ case of a recent human infection caused by an influenza A virus with the potential to cause a pandemic.⁶ Evidence of illness is not required for this report.
- It is critical that influenza viruses from animals and people are fully characterized in appropriate animal or human health influenza reference laboratories and reported according to international

⁵ World Health Organization. Case definitions for the four diseases requiring notification in all circumstances under the International Health Regulations (2005). www.who.int/ihr/Case_Definitions.pdf

⁶ World Health Organization. Manual for the laboratory diagnosis and virological surveillance of influenza (2011). www.who.int/influenza/gisrs_laboratory/manual_diagnosis_surveillance_influenza/en/

standards. Under WHO's Pandemic Influenza Preparedness (PIP) Framework, Member States are expected to share their influenza viruses with pandemic potential on a regular and timely basis with the Global Influenza Surveillance and Response System (GISRS), a WHO-coordinated network of public health laboratories. The viruses are used by the public health laboratories to assess the risk of pandemic influenza and to develop candidate vaccine viruses.

Links:

WHO Human-Animal Interface web page

http://www.who.int/influenza/human_animal_interface/en/

Cumulative Number of Confirmed Human Cases of Avian Influenza A(H5N1) Reported to WHO

http://www.who.int/influenza/human_animal_interface/H5N1_cumulative_table_archives/en/

Avian Influenza A(H7N9) Information

http://who.int/influenza/human_animal_interface/influenza_h7n9/en/index.html

WHO Avian Influenza Food Safety Issues

http://www.who.int/foodsafety/areas_work/zoonose/avian/en/

World Organisation of Animal Health (OIE) web page: Web portal on Avian Influenza

<http://www.oie.int/animal-health-in-the-world/web-portal-on-avian-influenza/>

Food and Agriculture Organization of the UN (FAO) webpage: Avian Influenza

<http://www.fao.org/avianflu/en/index.html>

OFFLU

<http://www.offlu.net/index.html>

Annex:

Table 1: Laboratory-confirmed human cases of avian influenza A(H7N9) virus infection (reported from 17 January to 14 February 2017)

Province or region reporting (province of assumed exposure, if different from reporting province or region)	Age	Sex	Case condition at time of reporting	Date of onset (dd/mm/yyyy)	Exposure history (at time of reporting)
Zhejiang	60	M	Severe	27/12/2016	Poultry from market
Jiangxi	53	M	Severe	23/12/2016	Live poultry market
Jiangsu	58	M	NR	21/12/2016	Under investigation
Jiangsu	24	M	NR	27/12/2016	Under investigation
Jiangsu	42	M	NR	22/12/2016	Under investigation
Guizhou	49	F	Fatal	25/12/2016	Occupational exposure
Jiangsu	72	F	NR	18/12/2016	Under investigation
Jiangsu	65	M	NR	27/12/2016	Under investigation
Anhui	66	M	Severe	22/12/2016	Live poultry market
Guangdong	63	F	Severe	21/12/2016	Live poultry market
Jiangsu	71	M	Severe	25/12/2016	Live poultry market
Zhejiang	75	M	NR	17/12/2016	Live poultry market
Zhejiang	32	M	Severe	30/12/2016	Unknown
Jiangsu	53	F	NR	22/12/2016	Under investigation
Fujian	35	M	Severe	28/12/2016	Domestic poultry
Zhejiang	49	F	NR	28/12/2016	Live poultry market
Shandong	77	M	Fatal	30/12/2016	No clear exposure
Jiangsu	64	M	NR	29/12/2016	Under investigation
Jiangsu	28	F	NR	01/01/2017	Under investigation
Jiangsu	54	F	NR	30/12/2016	Under investigation
Jiangxi	48	M	NR	24/12/2016	Live poultry market
Anhui	62	M	NR	13/12/2016	Under investigation
Jiangsu	62	M	NR	28/12/2016	Under investigation
Jiangsu	71	M	NR	29/12/2016	Under investigation
Jiangsu	61	F	NR	18/12/2016	Under investigation
Jiangsu	31	M	NR	29/12/2016	Under investigation
Anhui	51	M	Fatal	01/01/2017	Under investigation
Zhejiang	33	M	NR	30/12/2016	Live poultry market
Anhui	35	F	Severe	30/12/2016	No clear exposure
Zhejiang	36	F	NR	28/12/2016	Domestic poultry
Zhejiang	57	F	Severe	04/01/2017	Live poultry market
Zhejiang	56	M	NR	31/12/2016	Live poultry market
Jiangsu	47	M	NR	25/12/2016	Under investigation
Anhui	64	F	NR	01/01/2017	Under investigation
Jiangsu	65	M	NR	27/12/2016	Under investigation
Anhui	44	M	Severe	04/01/2017	Live poultry market
Guangdong	43	F	NR	30/12/2016	Poultry from a live poultry market and a confirmed case
Anhui	69	F	NR	04/01/2017	Under investigation
Jiangsu	35	M	NR	04/01/2017	Under investigation
Zhejiang	45	M	Severe	29/12/2016	Domestic poultry
Zhejiang	67	F	NR	30/12/2016	Live poultry market
Jiangxi	71	F	Fatal	28/12/2016	Live poultry market and domestic poultry
Guangdong	41	M	Severe	02/01/2017	Occupational exposure
Jiangsu	60	F	NR	23/12/2016	Under investigation
Shanghai	59	M	NR	30/12/2016	Under investigation
Shandong	53	M	Fatal	31/12/2016	No clear exposure
Jiangsu	38	F	NR	25/12/2016	Under investigation
Zhejiang	52	M	NR	29/12/2016	Exposure to poultry from market
Hunan	34	M	Severe	01/01/2017	Live poultry market
Jiangxi	83	F	Severe	02/01/2017	Live poultry market
Jiangxi	48	M	NR	01/01/2017	Live poultry market
Fujian	17	M	Severe	31/12/2016	Live poultry
Guizhou	52	M	Fatal	03/01/2017	Occupational exposure
Jiangxi	55	F	Severe	03/01/2017	Live poultry market
Hunan	79	M	Fatal	01/01/2017	Live poultry market

Jiangsu	68	M	NR	01/01/2017	Under investigation
Zhejiang	31	F	Severe	31/12/2016	Live poultry market
Zhejiang	69	M	Fatal	05/01/2017	Under investigation
Zhejiang	74	M	Fatal	02/01/2017	Slaughtered poultry
Zhejiang	43	F	Severe	29/12/2016	Live poultry market
Hunan	47	M	Fatal	01/01/2017	Live poultry market
Jiangsu	40	M	NR	25/12/2016	Under investigation
Jiangsu	50	M	NR	28/12/2016	Under investigation
Jiangsu	58	M	NR	01/01/2017	Under investigation
Jiangsu	28	M	NR	01/01/2017	Under investigation
Jiangsu	61	M	NR	02/01/2017	Under investigation
Zhejiang	69	M	Severe	02/01/2017	Live poultry market
Jiangsu	68	M	NR	08/01/2017	Under investigation
Anhui (Jiangsu)	49	M	Fatal	20/12/2016	Under investigation
Shanghai	60	M	NR	04/01/2017	Under investigation
Zhejiang	68	M	NR	07/01/2017	Live poultry market
Jiangsu	59	F	NR	03/01/2017	Under investigation
Jiangsu	54	F	NR	01/01/2017	Under investigation
Zhejiang	70	F	NR	08/01/2017	Under investigation
Jiangsu (Zhejiang)	36	M	Fatal	25/12/2016	Under investigation
Jiangxi	50	F	Severe	02/01/2017	Live poultry market
Hunan	59	M	Severe	31/12/2016	Live poultry market
Fujian	75	M	NR	04/01/2017	No clear exposure
Jiangxi	40	M	Severe	03/01/2017	Live poultry market and domestic poultry
Fujian	37	M	NR	03/01/2017	No clear exposure
Jiangsu	52	M	NR	09/01/2017	Under investigation
Zhejiang	68	M	NR	09/01/2017	Under investigation
Guangdong	77	F	Fatal	05/01/2017	Under investigation
Jiangxi	62	M	Severe	04/01/2017	Live poultry market
Jiangxi	3	M	NR	07/01/2017	Under investigation
Hubei	38	M	Severe	01/01/2017	Live poultry market
Guangdong	44	M	NR	17/12/2016	Under investigation
Guangdong	60	F	NR	10/01/2017	Under investigation
Zhejiang	59	M	NR	06/01/2017	Under investigation
Guangdong	57	M	NR	05/01/2017	Under investigation
Anhui	77	F	NR	10/01/2017	Under investigation
Zhejiang	58	F	NR	01/01/2017	Under investigation
Fujian	58	F	NR	09/01/2017	Live poultry market
Jiangsu	64	M	NR	01/01/2017	Under investigation
Hunan	72	M	Severe	05/01/2017	Live poultry market and domestic poultry
Anhui	63	M	NR	03/01/2017	Under investigation
Anhui (Jiangsu)	53	M	NR	09/01/2017	Under investigation
Jiangsu	61	M	NR	11/01/2017	Under investigation
Guangdong	74	F	Severe	27/12/2016	Live poultry market
Guangdong	50	M	Severe	03/01/2017	Live poultry market
Guizhou	76	F	NR	05/01/2017	Live poultry market
Guangdong	62	M	Fatal	08/01/2017	Live poultry market
Anhui	74	M	NR	11/01/2017	Under investigation
Jiangsu	59	M	NR	01/01/2017	Under investigation
Zhejiang	56	M	NR	07/01/2017	Under investigation
Zhejiang	33	F	NR	04/01/2017	Under investigation
Hunan	72	M	NR	10/01/2017	Under investigation
Anhui	58	M	NR	12/01/2017	Poultry from live poultry market
Anhui	44	F	NR	13/01/2017	Under investigation
Jiangsu	68	M	NR	08/01/2017	Under investigation
Jiangxi	51	M	Severe	08/01/2017	Poultry from live poultry market
Zhejiang	83	F	Severe	09/01/2017	Live poultry market
Jiangsu	57	M	Fatal	10/01/2017	Domestic poultry
Guangdong	81	M	Severe	04/01/2017	Live poultry market
Hunan	36	F	Severe	10/01/2017	Live poultry market
Jiangsu	67	M	Severe	07/01/2017	No clear exposure
Hunan	66	M	NR	11/01/2017	To be investigated
Zhejiang	80	M	Severe	07/01/2017	Live poultry market and domestic poultry
Hunan	60	M	Fatal	05/01/2017	Live poultry market
Hunan	65	M	NR	14/01/2017	To be investigated
Guangdong	33	M	Severe	08/01/2017	No specific exposure to live poultry
Jiangsu	57	M	Fatal	07/01/2017	Live poultry market

Guangdong	37	M	Severe	11/01/2017	Live poultry market
Guangdong	45	M	Severe	13/01/2017	Occupational exposure
Hunan	55	M	NR	11/01/2017	To be investigated
Jiangsu	66	F	Severe	09/01/2017	No clear history of exposure to live poultry
Anhui	36	F	Severe	11/01/2017	Live poultry market
Hunan	57	M	Severe	13/01/2017	Exposure to live poultry market and domestic poultry
Jiangsu	39	M	Severe	14/01/2017	No clear history of exposure to live poultry
Hunan	76	M	Fatal	14/01/2017	Live poultry market
Guangdong	55	M	Fatal	08/01/2017	Live poultry market
Jiangsu	65	M	NR	12/01/2017	To be investigated
Jiangsu	62	M	NR	11/01/2017	Domestic poultry
Guangdong	34	F	NR	10/01/2017	Live poultry market
Jiangxi	84	M	Fatal	12/01/2017	Exposure to live poultry market and domestic poultry
Hunan	64	M	Severe	13/01/2017	Live poultry market
Zhejiang	69	M	NR	16/01/2017	To be investigated
Fujian (Jiangsu)	30	M	NR	15/01/2017	To be investigated
Jiangsu	56	F	NR	11/01/2017	To be investigated
Guangdong	49	F	NR	13/01/2017	To be investigated
Anhui	61	M	NR	20/01/2017	To be investigated
Jiangxi	59	M	NR	12/01/2017	To be investigated
Guangdong	71	M	Severe	10/01/2017	Domestic poultry
Hunan	37	F	Severe	14/01/2017	Live poultry market
Hunan	26	M	NR	18/01/2017	Exposure to live poultry market and domestic poultry
Jiangxi	58	F	Severe	17/01/2017	Domestic poultry
Zhejiang	59	M	NR	15/01/2017	To be investigated
Guangdong	70	M	Fatal	19/01/2017	Exposure to live poultry market and domestic poultry
Guangdong	46	M	Fatal	17/01/2017	Exposure to live poultry market and domestic poultry
Jiangsu (Henan)	36	M	Fatal	15/01/2017	Live poultry market
Henan	59	M	Fatal	14/01/2017	To be investigated
Jiangsu	59	M	NR	10/01/2017	Exposure to live poultry market and domestic poultry
Fujian	49	M	Fatal	11/01/2017	Domestic poultry
Anhui	33	F	NR	20/01/2017	To be investigated
Jiangxi (Hubei)	64	M	Severe	16/01/2017	To be investigated
Zhejiang	59	M	NR	17/01/2017	To be investigated
Shandong	59	M	Severe	17/01/2017	Live poultry market
Hubei	78	F	Fatal	16/01/2017	Domestic poultry
Jiangsu	59	F	Severe	10/01/2017	Live poultry market
Jiangxi	62	F	Fatal	19/01/2017	Live poultry market
Fujian	64	M	NR	23/01/2017	To be investigated
Fujian	38	M	Severe	20/01/2017	Live poultry market
Zhejiang	60	M	NR	17/01/2017	To be investigated
Guizhou	51	M	Fatal	20/01/2017	No specific exposure to live poultry
Hunan	66	M	Severe	18/01/2017	Live poultry market
Jiangxi	50	M	NR	15/01/2017	Exposure to live poultry market and domestic poultry
Guangdong	58	M	NR	10/01/2017	Live poultry market
Anhui	29	M	NR	18/01/2017	To be investigated
Hubei	46	M	Severe	21/01/2017	Domestic poultry
Sichuan	58	M	Severe	16/01/2017	Live poultry market
Jiangsu (Anhui)	33	M	NR	19/01/2017	To be investigated
Jiangsu	78	M	NR	23/01/2017	To be investigated
Hunan	29	M	NR	22/01/2017	Domestic poultry
Jiangxi	71	M	NR	20/01/2017	To be investigated
Liaoning	32	M	NR	16/01/2017	Live poultry market
Liaoning	67	M	NR	21/01/2017	Live poultry market
Fujian	38	M	NR	23/01/2017	To be investigated
Hubei	40	M	Severe	21/01/2017	Domestic poultry
Zhejiang	51	M	NR	22/01/2017	Domestic poultry
Jiangsu	46	F	NR	29/01/2017	Live poultry market
Anhui	32	M	NR	26/01/2017	Exposure to live poultry market and domestic poultry
Jiangxi	53	M	NR	21/01/2017	Domestic poultry
Zhejiang	53	F	Severe	21/01/2017	To be investigated
Zhejiang	62	M	NR	27/01/2017	Live poultry market
Jiangsu	60	M	NR	19/01/2017	To be investigated
Fujian	62	M	NR	24/01/2017	Live poultry
Sichuan	57	M	NR	16/01/2017	To be investigated
Fujian	75	M	NR	23/01/2017	Domestic poultry
Jiangsu	40	M	NR	23/01/2017	To be investigated

Zhejiang	42	M	NR	26/01/2017	To be investigated
Hunan	38	M	Severe	25/01/2017	Live poultry
Anhui	47	M	NR	23/01/2017	Live poultry market
Hubei	55	M	Severe	25/01/2017	Live poultry market
Guangdong	62	F	NR	27/01/2017	To be investigated
Jiangsu	39	F	Severe	28/01/2017	Live poultry market
Jiangsu	67	F	Severe	25/01/2017	Live poultry market
Zhejiang	76	F	NR	23/01/2017	To be investigated
Jiangxi	67	M	NR	24/01/2017	To be investigated
Zhejiang	58	M	NR	24/01/2017	To be investigated
Anhui	39	F	NR	29/01/2017	Live poultry market
Guangdong	68	F	NR	25/01/2017	Live poultry market
Zhejiang	56	M	NR	30/01/2017	To be investigated
Zhejiang	32	M	NR	30/01/2017	To be investigated
Jiangsu	45	M	NR	23/01/2017	To be investigated
Fujian	76	M	NR	27/01/2017	Live poultry market
Jiangxi	82	M	NR	26/01/2017	To be investigated
Zhejiang	61	M	NR	28/01/2017	To be investigated
Jiangsu	46	M	NR	26/01/2017	To be investigated
Guangxi	32	M	NR	28/01/2017	To be investigated
Hubei	42	M	NR	27/01/2017	Occupational exposure
Jiangsu	64	M	NR	29/01/2017	Exposure to live poultry market and domestic poultry
Jiangsu	76	M	NR	29/01/2017	Domestic poultry
Guangdong	51	M	NR	16/01/2017	To be investigated
Hubei	34	M	NR	01/02/2017	To be investigated
Jiangsu	62	F	NR	26/01/2017	To be investigated
Jiangsu	70	F	NR	27/01/2017	To be investigated
Anhui	43	F	NR	26/01/2017	To be investigated
Sichuan	55	M	Severe	27/01/2017	Domestic poultry
Zhejiang	69	F	NR	25/01/2017	To be investigated
Anhui	65	M	NR	27/01/2017	To be investigated
Guangdong	62	F	NR	31/01/2017	To be investigated
Fujian	67	M	NR	28/01/2017	Domestic poultry
Henan	38	M	Severe	24/01/2017	Live poultry market
Hubei	70	F	Mild	27/01/2017	Exposure to live poultry market and domestic poultry
Hunan	69	F	Severe	26/01/2017	Live poultry market
Zhejiang	38	M	NR	26/01/2017	To be investigated
Zhejiang (Anhui)	66	M	NR	29/01/2017	To be investigated
Anhui	53	M	NR	25/01/2017	To be investigated
Zhejiang	83	F	NR	28/01/2017	To be investigated
Jiangxi	38	F	NR	21/01/2017	Live poultry market
Hubei	27	M	NR	31/01/2017	To be investigated
Zhejiang	46	M	NR	28/01/2017	To be investigated
Hubei	29	M	NR	01/02/2017	To be investigated
Fujian	61	M	NR	28/01/2017	To be investigated
Jiangsu	54	M	NR	30/01/2017	To be investigated
Hunan	48	M	NR	31/01/2017	To be investigated
Hunan	78	F	Severe	28/01/2017	Live poultry market
Fujian	47	M	Severe	31/01/2017	Live poultry market
Jiangxi	80	M	Fatal	29/01/2017	Live poultry market and domestic poultry
Anhui	78	M	Fatal	04/02/2017	To be investigated
Zhejiang	70	F	NR	30/01/2017	To be investigated
Zhejiang	71	M	NR	06/01/2017	To be investigated
Anhui	38	F	NR	01/02/2017	To be investigated
Jiangxi	69	M	NR	28/01/2017	To be investigated
Hunan	42	M	Severe	28/01/2017	Live poultry market and domestic poultry
Hunan	75	M	NR	29/01/2017	To be investigated
Jiangsu	60	M	NR	31/01/2017	To be investigated
Guangdong	81	M	NR	30/01/2017	Live poultry market
Anhui	65	M	NR	03/02/2017	To be investigated
Zhejiang	53	M	Fatal	28/01/2017	To be investigated
Zhejiang	82	F	Fatal	04/02/2017	To be investigated
Hubei	64	F	NR	01/02/2017	Live poultry market
Hubei	73	M	Severe	29/01/2017	Live poultry market
Zhejiang (Jiangsu)	40	M	NR	26/01/2017	To be investigated
Hubei	72	M	NR	30/01/2017	To be investigated
Henan	53	M	Severe	01/02/2017	Live poultry market

Guangdong	76	M	NR	01/02/2017	To be investigated
Hubei	69	M	NR	01/02/2017	Domestic poultry
Zhejiang	78	M	NR	05/02/2017	To be investigated
Sichuan	75	M	NR	30/01/2017	Live poultry market
Jiangsu	82	F	NR	01/02/2017	To be investigated
Hubei	26	F	NR	30/01/2017	Live poultry market
Guangdong	48	M	Severe	29/01/2017	Live poultry market
Jiangsu	44	M	Severe	05/02/2017	To be investigated
Zhejiang	75	F	NR	31/01/2017	To be investigated
Jiangxi	67	M	NR	01/02/2017	Live poultry market
Anhui	46	F	NR	01/02/2017	To be investigated
Zhejiang	44	M	NR	02/02/2017	To be investigated
Fujian	56	M	Severe	31/01/2017	Poultry from street vendors
Hubei	50	M	NR	14/01/2017	To be investigated
Zhejiang	62	F	Fatal	30/01/2017	To be investigated
Guangdong	62	M	Severe	03/02/2017	No specific exposure
Jiangsu	33	M	NR	05/02/2017	To be investigated
Guangdong	66	M	Severe	29/01/2017	Domestic poultry
Fujian	67	M	NR	31/01/2017	Live poultry markets and domestic poultry
Fujian	52	M	NR	31/01/2017	Live poultry market
Henan	35	F	Mild	02/02/2017	Occupational exposure
Hubei	59	M	NR	01/02/2017	To be investigated
Hubei	52	F	NR	30/01/2017	To be investigated
Fujian	82	F	Fatal	04/02/2017	Live poultry market
Guangdong	78	F	Fatal	03/02/2017	To be investigated
Jiangsu	62	M	NR	05/02/2017	To be investigated
Yunnan (Jiangxi)	3	F	Fatal	30/01/2017	Domestic poultry
Zhejiang	59	M	NR	31/01/2017	To be investigated
Shandong	48	M	Severe	26/01/2017	Live poultry
Shanghai	59	M	NR	25/01/2017	To be investigated
Jiangxi	81	M	NR	28/01/2017	To be investigated
Guangdong	58	M	Severe	06/02/2017	Live poultry market and domestic poultry
Hubei	59	M	NR	01/02/2017	To be investigated
Jiangsu	85	F	NR	05/02/2017	To be investigated
Hunan	55	M	Severe	03/02/2017	Live poultry market
Beijing	67	M	Severe	01/02/2017	Live poultry market
Anhui	74	M	NR	04/02/2017	Live poultry and live poultry market
Anhui	59	M	NR	27/01/2017	Live poultry market and domestic poultry
Jiangsu	54	F	NR	29/01/2017	To be investigated
Yunnan (Jiangxi)	22	F	NR	08/02/2017	Domestic poultry and a confirmed case
Jiangxi	52	F	NR	01/02/2017	Live poultry and live poultry markets
Hubei	44	M	NR	08/02/2017	Live poultry
Sichuan	59	M	NR	06/02/2017	To be investigated
Hunan	71	M	Severe	03/02/2017	Live poultry
Hubei	66	M	NR	01/02/2017	To be investigated
Sichuan	48	F	NR	09/02/2017	To be investigated
Jiangsu	68	F	NR	31/01/2017	To be investigated
Taiwan (Guangdong)	69	M	Severe	23/01/2017	No known exposure

NR: not reported