

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

XDR Tuberculosis cluster – Romania

Opening date: 10 October 2016

Latest update: 21 October 2016

A cluster of extensively drug-resistant tuberculosis (XDR-TB) has been reported in relation to a university in Romania. Four cases have been detected: three in students in the same year of study, and one in a family member. So far, 87 contacts have been identified and are being followed up. Contacts tested positive for active TB will be treated, while contacts tested positive for latent TB infection (LTBI) will receive preventive treatment if appropriate and will be monitored.

→Update of the week

During the past week, ECDC has produced a [risk assessment](#) about this XDR- TB cluster.

Influenza - Multistate (Europe) - Monitoring 2016-2017 season

Opening date: 13 October 2016

Latest update: 21 October 2016

Influenza transmission in Europe shows a seasonal pattern, with peak activity during winter months. ECDC monitors influenza activity in Europe during the winter season and publishes its weekly report on the [Flu News Europe website](#).

→Update of the week

Week 41/2016 (10 – 16 October 2016) is the second weekly influenza report for the 2016-2017 season. Low influenza activity was reported by 42 countries.

West Nile virus - Multistate (Europe) - Monitoring season 2016

Opening date: 30 May 2016

Latest update: 21 October 2016

During the June-to-November transmission season, ECDC monitors the situation in EU Member States and neighbouring countries in order to inform the blood safety authorities of areas affected by West Nile fever and changes in the epidemiology of the disease.

→Update of the week

This week, ten cases have been reported, seven in EU Member States and three cases in the neighbouring countries. Since the beginning of the 2016 transmission season and as of 20 October 2016, 198 cases of West Nile fever in humans have been reported in the EU Member States and 249 cases in the neighbouring countries.

Increase in cases of *Salmonella* Enteritidis MLVA profile 2-9-7-3-2 - multistate - Europe - 2016

Opening date: 4 March 2016

Latest update: 21 October 2016

A multi-country outbreak of *Salmonella* Enteritidis phage type (PT) 8 with multiple locus variable-number tandem repeat analysis (MLVA) profiles 2-9-7-3-2 and 2-9-6-3-2, possibly linked to eggs, is ongoing in the EU/EEA. Based on whole genome sequencing (WGS), isolates are part of two distinct but related genetic clusters.

Non EU Threats

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005

Latest update: 21 October 2016

Global public health efforts are ongoing to eradicate polio, a crippling and potentially fatal disease, by immunising every child until transmission of the virus has completely stopped and the world becomes polio-free. Polio was declared a Public Health Emergency of International Concern (PHEIC) by the World Health Organization (WHO) on 5 May 2014 due to concerns regarding the increased circulation and international spread of wild poliovirus during 2014. On 11 August 2016, at the [tenth meeting of the Emergency Committee](#), the temporary recommendations in relation to the PHEIC were extended for another three months. The World Health Organization recently declared wild poliovirus type 2 (WPV2) eradicated worldwide.

→Update of the week

No new cases of wild poliovirus and no new circulating vaccine-derived poliovirus (cVDPV) were reported in the past week.

Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015

Latest update: 21 October 2016

Since 1 February 2016, Zika virus infection and the related clusters of microcephaly cases and other neurological disorders constitute a public health emergency of international concern (PHEIC). Since 2015, and as of 20 October 2016, there have been 69 countries and territories reporting mosquito-borne transmission of the virus. According to WHO and as of 20 October 2016, 23 countries or territories have reported microcephaly and other central nervous system (CNS) malformations in newborns potentially associated with Zika virus infection.

→Update of the week

In the USA, 11 new locally-acquired cases have been reported in Florida since the last CDTR, bringing the cumulative number of locally-acquired cases to 166.

On 14 October 2016, [Martinique](#) declared the Zika outbreak phase over, as only 90 cases were identified from 26 September to 2 October, compared with 1 140 weekly cases during the peak of the epidemic between 30 May and 5 June.

On 17 October 2016, the health authorities in [Vietnam](#) reported the first possible case of microcephaly associated with Zika in a 4-month-old child living in Krong Buk district, Dak Lak province.

In [Trinidad and Tobago](#), brain abnormalities were recently detected on the ultrasounds of five unborn babies, at least four of them with Zika as the sole risk factor. [Trinidad and Tobago](#) registers approximately 12 cases of microcephaly yearly due to a variety of genetic causes.

On 19 October, [US CDC](#) updated guidance for pregnant women and women and men of reproductive age for Zika virus infection related to the ongoing investigation of local mosquito-borne Zika virus transmission in Miami-Dade county, Florida.

In the ECDC map: Fiji and Solomon Islands have been added back to the map indicating transmission in the past three months and the status of Vietnam has changed to 'widespread transmission'.

ECDC is preparing the ninth update of the rapid risk assessment to be published on 25 October.

Influenza A(H5N1) and other strains of avian flu - Non EU/EEA countries

Opening date: 15 June 2005

Latest update: 21 October 2016

Highly pathogenic avian influenza viruses A(H5) of Asian origin are highly infectious for several bird species, including poultry. The human infections with influenza A(H5) viruses have been caused by influenza A(H5N1) virus in several non-EU/EEA countries and by influenza A(H5N6) virus in China. Other avian influenza subtypes, including H7N7 and H9N2, have infected people sporadically. Many of these infections have been mild or even subclinical in humans, but some have been severe and have resulted in deaths. ECDC is following the development of these viruses and is monitoring infections in humans.

→Update of the week

Between 20 July and 3 October 2016 new human infections with A(H5N1), A(H7N9), A(H9N2) and A(H1N2)v viruses were reported by [WHO](#).

Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013

Latest update: 21 October 2016

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, and up to 3 October 2016, 798 cases have been reported to WHO, including at least 320 deaths. No autochthonous cases have been reported outside China. Most cases are isolated, and sporadic zoonotic transmission from poultry to humans is the most likely explanation for the outbreak.

→Update of the week

From 20 July to 3 October 2016, China reported five cases of A(H7N9), including one fatal case to [WHO](#). Among the five cases, there is a possible human-to-human transmission in a household cluster consisting of three cases.

II. Detailed reports

XDR Tuberculosis cluster – Romania

Opening date: 10 October 2016

Latest update: 21 October 2016

Epidemiological summary

A cluster of four XDR-TB cases has been reported linked to the Faculty of Medicine and Pharmacy in Oradea Municipality, Bihor County, Romania. The index case (case 1) is an Israeli citizen who attended this university and was diagnosed in Israel in June 2015; she was free of TB before travelling to Romania. Two further cases are among UK residents who attended the same university: one (case 2) was diagnosed in October 2015 in Romania as a result of contact tracing around case 1, and the other (case 3) was diagnosed in the UK in September 2016 after having been tested negative in October 2015. An additional case (case 4) was diagnosed in a relative in the UK as a result of contact tracing around case 2. Case 1, case 2 and case 3 were in contact with each other at the university, with case 2 and case 3 living on the same floor in the same building.

The contact tracing initiated in September 2016 identified 87 contacts of case 1, including case 2 and case 3. Of these, 77 contacts are currently in Romania and have the following nationalities: Romania (35), Finland (12), UK (9), Germany (4), Israel (3), Nigeria (3), Sweden (3), Mauritius Islands (2), Austria (1), Hungary (1), Italy (1), Palestine* (1), Poland (1) and the United Arab Emirates (1). The ten other contacts had already left Romania, and therefore the results of their first screening were communicated to the respective authorities in their country of origin: Finland, Germany, Sweden and the UK.

To date, apart from case 2 and case 3, no cases have been detected yet among Romanian students/faculty personnel who are known contacts of case 1.

*This designation shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue.

ECDC assessment

Contacts are being followed up to identify and adequately treat active TB cases among them as well as testing for latent TB infection (LTBI) using tuberculin skin test (TST).

Infected persons who do not present with symptoms of TB are not infectious. However, they are at risk of developing active TB disease and becoming infectious. The lifetime risk of reactivation TB for a person with documented LTBI is estimated to be 5 to 10%, with the majority developing TB disease within the first five years after initial infection.

Contacts identified with LTBI may receive preventive treatment depending on the drug susceptibility profile of the XDR-TB strain and they should be closely monitored with clinical observation to ensure early detection of XDR-TB and to prevent further transmission.

Current contact tracing activities should mitigate the risks of further transmission. However, more cases may be expected in association with this cluster. It will therefore be important to trace all contacts of any such additional cases in order to identify and treat active cases and provide preventive treatment or monitoring for those diagnosed with LTBI.

Actions

ECDC is updating its [risk assessment](#). ECDC will continue monitoring this event through the tuberculosis team.

Influenza - Multistate (Europe) - Monitoring 2016-2017 season

Opening date: 13 October 2016

Latest update: 21 October 2016

Epidemiological summary

In week 41/2016 (10 – 16 October 2016), epidemiological data were reported by 42 countries, all of which reported low influenza activity. Two influenza viruses were detected in the community and none were detected in hospitalised cases.

ECDC assessment

As is usual for this time of year, influenza activity is low in the European Region.

Actions

ECDC monitors influenza activity in Europe during the winter season and publishes its weekly report on the [Flu News Europe website](#). Risk assessments for the season are available from the European Centre for Disease Prevention and Control ([ECDC](#)) and the [WHO Regional Office for Europe](#) websites.

West Nile virus - Multistate (Europe) - Monitoring season 2016

Opening date: 30 May 2016

Latest update: 21 October 2016

Epidemiological summary

During the past week, Bulgaria reported one case in Sofia. A second case in Bulgaria is under investigation. These are the first cases reported by Bulgaria in the current transmission season. Italy reported two new cases in Emilia-Romagna. Romania reported three new cases, all in newly-affected areas: Bistriti Nasaud, Neamt and Satu-Mare.

In the neighbouring countries, Russia reported one new case in already-affected oblast Lipetsk. Serbia has reported two new cases in Grad Beograd.

Source: [ECDC WNF page](#) | [PHI Serbia](#) | [MoH Russia](#)

ECDC assessment

Although there has been a notable peak in WNV transmission in the EU in the past few weeks, the overall number of cases are still within the historical range of values.

Actions

Since the beginning of June 2016, ECDC produces weekly WNF maps during the transmission season to inform blood safety authorities of WNF-affected areas.

Increase in cases of Salmonella Enteritidis MLVA profile 2-9-7-3-2 - multistate - Europe - 2016

Opening date: 4 March 2016

Latest update: 21 October 2016

Epidemiological summary

From 1 May 2016 to 12 October 2016, seven EU/EEA countries have reported 112 confirmed cases belonging to two distinct WGS clusters and 148 probable cases sharing the identical *Salmonella* Enteritidis MLVA profiles 2-9-7-3-2 or 2-9-6-3-2. Outbreak cases, both confirmed and probable, have been reported by Belgium, Denmark, Luxembourg, the Netherlands, Norway, Sweden and the United Kingdom. Nine of the confirmed cases are associated with a travel history to Hungary or Poland that should also be considered affected by this outbreak.

ECDC assessment

A rapid risk assessment was first published on the ECDC website on 5 September 2016 describing a multi-country outbreak of *Salmonella* Enteritidis phage type (PT) 8 with multiple locus variable-number tandem repeat analysis (MLVA) profile 2-9-7-3-2. A joint rapid outbreak assessment with EFSA, including the latest information from investigations, is being prepared.

Actions

ECDC is liaising with the European Commission and EFSA. ECDC is preparing a joint rapid outbreak assessment (ROA) with EFSA. It is intended to be published Wednesday 26 October 2016.

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

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Opening date: 8 September 2005

Latest update: 21 October 2016

Epidemiological summary

As of 18 October 2016, 27 cases of WPV1 have been reported to WHO in 2016, compared with 51 for the same period in 2015. The cases were detected in Pakistan (15), Afghanistan (8) and Nigeria (4). Three cases of cVDPV have been reported in 2016, compared with 16 for the same period in 2015. The three cases were all detected in Laos.

Web sources: [Polio eradication: weekly update](#) | [ECDC Poliomyelitis factsheet](#) | [Temporary Recommendations to Reduce International Spread of Poliovirus](#) | [WHO Statement on the Seventh Meeting of the International Health Regulations Emergency Committee on Polio](#)

ECDC assessment

The detection of new cases in Nigeria is not unusual or unexpected. It is not an indication that the current outbreak response is not effective, as it is too early to see an impact on the epidemiology of the virus circulation. It is an indicator that surveillance continues to be strengthened.

Continued detection of positive environmental samples throughout 2016 in Pakistan confirms that virus transmission remains geographically widespread across the country, despite strong improvements being achieved.

The last locally-acquired wild polio cases within the current EU borders were reported from Bulgaria in 2001. The most recent wild polio outbreak in the WHO European Region was in Tajikistan in 2010, when importation of WPV1 from Pakistan resulted in 460 cases.

References: [ECDC latest RRA](#) | [Rapid Risk Assessment on suspected polio cases in Syria and the risk to the EU/EEA](#) | [Wild-type poliovirus 1 transmission in Israel - what is the risk to the EU/EEA?](#) | [RRA Outbreak of circulating vaccine-derived poliovirus type 1 \(cVDPV1\) in Ukraine](#)

Actions

ECDC monitors reports of polio cases worldwide through epidemic intelligence in order to highlight polio eradication efforts and identify events that increase the risk of wild poliovirus being reintroduced to the EU. Following the declaration of polio as a PHEIC, ECDC updated its [risk assessment](#). ECDC has also prepared a background document with travel recommendations for the EU.

Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015

Latest update: 21 October 2016

Epidemiological summary

1. Update on number of cases

The USA

Eleven locally-acquired cases have been recorded in Florida over the past week. To date, 166 locally-acquired and 747 imported cases of Zika have been reported in Florida. The distribution of the locally-acquired cases is as follows: 154 in Miami-Dade, five in Palm beach, one in Pinellas and one in Broward. The location of exposure for the other five cases is still under investigation.

EU/EEA imported cases:

Since July 2015 (week 26), 19 countries (Austria, Belgium, the Czech Republic, Denmark, Finland, France, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom) have reported 1 935 travel-associated Zika virus infections through The European Surveillance System (TESSy). Over the same time period, seven EU countries reported 91 Zika cases among pregnant women.

EU's Outermost Regions and Territories

As of 20 October 2016:

Martinique: 36 590 suspected cases have been reported, an increase of 65 cases during the last week. Martinique declared the Zika outbreak phase over.

French Guiana: 9 851 suspected cases have been detected, an increase of 40 cases since the previous week. According to the regional situation report, the epidemic is over.

Guadeloupe: 30 775 suspected cases have been detected, an increase of 55 suspected cases since the previous week. The

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weekly number of cases has been decreasing.

St Barthélemy: 820 suspected cases have been detected, an increase of 15 suspected cases since the previous week. The weekly number of cases is stable.

St Martin: 2 670 suspected cases have been detected, an increase of 70 suspected cases since the previous week. The weekly number of cases is stable.

Since February 2016, 12 countries have reported evidence of person-to-person transmission of Zika virus, probably via a sexual route.

2. Update on microcephaly and/or central nervous system (CNS) malformations potentially associated with Zika virus infection

As of 20 October 2016, microcephaly and other central nervous system (CNS) malformations associated with Zika virus infection or suggestive of congenital infection have been reported by 23 countries or territories. Brazil reports the highest number of cases. Nineteen countries and territories worldwide have reported an increased incidence of Guillain-Barré syndrome (GBS) and/or laboratory confirmation of a Zika virus infection among GBS cases.

Web sources: [ECDC Zika Factsheet](#) | [PAHO](#) | [Colombian MoH](#) | [Brazilian MoH](#) | [Brazilian microcephaly case definition](#) | [SAGE MOH Brazil](#) | [Florida Health department](#)

ECDC assessment

The spread of the Zika virus in the Americas and Asia is likely to continue as the vectors (*Aedes aegypti* and *Aedes albopictus* mosquitoes) are widely distributed there. The likelihood of travel-related cases in the EU is increasing. A detailed [risk assessment](#) was published on 30 August 2016. As neither treatment nor vaccines are available, prevention is based on personal protection measures. Pregnant women should consider postponing non-essential travel to Zika-affected areas.

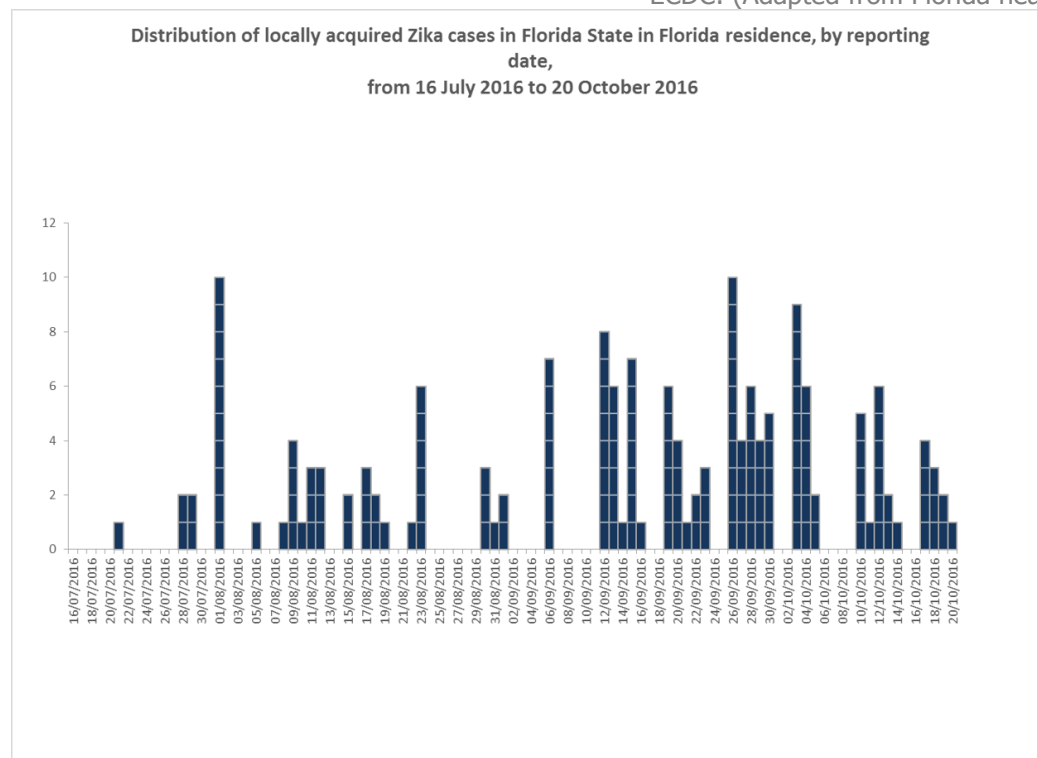
Actions

ECDC publishes an [epidemiological update](#) every Friday together with [maps](#) containing information on countries or territories which have reported confirmed autochthonous cases of Zika virus infection. A Zika virus infection atlas is also available on the ECDC [website](#).

ECDC publishes information concerning vector distribution on the [ECDC website](#), showing the distribution of the vector species at 'regional' administrative level (NUTS3).

Distribution of locally acquired Zika cases in Florida State (US), by reporting date, from 16 July 2016 to 20 October 2016

ECDC: (Adapted from Florida health department and media)



Influenza A(H5N1) and other strains of avian flu - Non EU/EEA countries

Opening date: 15 June 2005

Latest update: 21 October 2016

Epidemiological summary

Influenza A(H5)

According to WHO, China has reported four A(H5N6) cases in 2016.

Egypt reported 10 cases of A(H5N1) (the date of disease onset for two of these fell outside of the reporting period).

Influenza A(H9N2)

China reported six human cases of A(H9N2) virus infection over the past six months (including one retrospective case from 2015). One was a fatal case in a woman with pre-existing condition.

Influenza A(H1N2)v

Brazil has reported one new laboratory-confirmed human infection with an A(H1N2) variant virus. The infection occurred in an adolescent in November 2015, in the southern region of Brazil, and was detected through surveillance for influenza-like illness. The virus was similar to A(H1N2) swine influenza viruses isolated in 2011 and 2013 from pigs in that region, and the case did report contact with swine prior to illness onset. No further cases were detected at the time, and retrospective analyses of samples collected in the same area have not revealed any additional cases. Genetically, this virus does not resemble the influenza A(H1N2) v viruses detected in the United States this year.

From 2003 to 3 October 2016, 856 laboratory-confirmed cases of human infection with avian influenza A(H5N1) virus, including 452 deaths, have been reported from 16 countries. In addition, 14 laboratory-confirmed cases of human infection with avian influenza A(H5N6) virus, including six deaths, have been detected in China since 2013.

Web sources: [ECDC Rapid Risk Assessment](#) | [Avian influenza on ECDC website](#) | [EMPRES](#) | [OIE](#) | [WHO](#)

ECDC assessment

When avian influenza viruses circulate in poultry, sporadic infections or small clusters of human cases are possible among people exposed to infected poultry or contaminated environments, especially in households and at live bird markets. The viruses remain

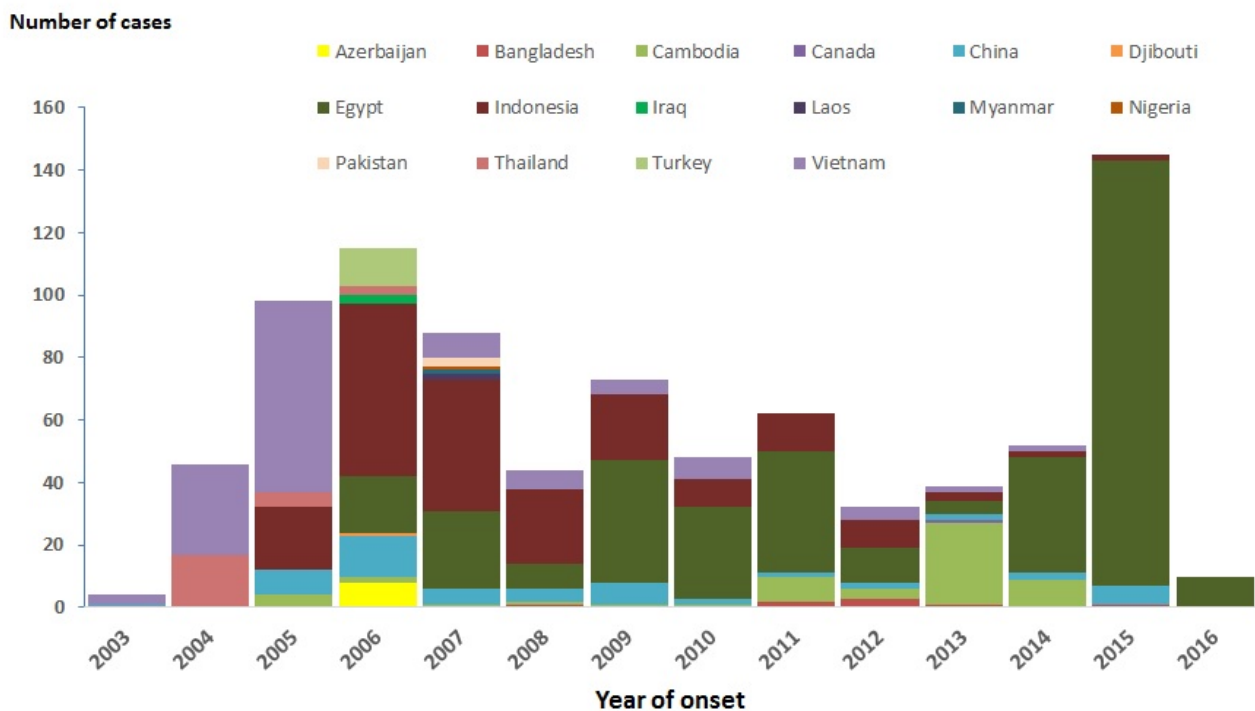
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poorly adapted to humans, and transmission from birds to humans is infrequent. Only limited clusters of human cases have been reported since the first human epidemic of A(H5N1). No sustained human-to-human transmission has been observed. The risk of foodborne transmission, e.g. through the consumption of eggs or meat, is considered to be extremely low.

Actions

ECDC monitors avian influenza strains through epidemic intelligence activities in order to identify significant changes in the epidemiology of the virus. ECDC re-assesses the potential of the A(H5N1) risk to humans on a regular basis.

Distribution of confirmed cases of A(H5N1) by country of reporting 2003 - 2016



Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013

Latest update: 21 October 2016

Epidemiological summary

The human cases of influenza A(H7N9) reported by China since March 2013 have the following geographical distribution: Zhejiang (219), Guangdong (195), Jiangsu (104), Fujian (71), Shanghai (51), Anhui (38), Hunan (34), Hong Kong (16), Jiangxi (15), Xinjiang Uyghur (10), Beijing (9), Shandong (8), Guangxi (4), Henan (4), Hebei (4), Hubei (2), Jilin (2), Tianjin (2), Guizhou (2) and Liaoning (1) and four cases in Taiwan. Three imported cases have also been reported: one in Malaysia and two in Canada.

Web sources: [Chinese CDC](#) | [WHO](#) | [WHO FAQ page](#) | [ECDC](#)

ECDC assessment

This outbreak is caused by a novel reassortant avian influenza virus capable of causing severe disease in humans. This is a zoonotic outbreak, in which the virus is transmitted sporadically to humans in close contact with the animal reservoir, similar to the influenza A(H5N1) situation.

In the past 12 months, there have been continued avian influenza A(H7N9) virus detections in the animal population in several provinces of China, indicating that the virus persists in the poultry population. If the pattern of human cases follows the trends seen in previous years, the number of human cases may rise over the coming months. Further sporadic cases of human infection with avian influenza A(H7N9) virus are therefore expected in neighbouring areas and in areas that are already affected.

Imported cases of influenza A(H7N9) may be detected in Europe. However, the risk of the disease spreading among humans following an importation to Europe is considered to be very low. People in the EU presenting with severe respiratory infection and a history of potential exposure in the outbreak area will require careful investigation.

Actions

The Chinese health authorities continue to respond to this public health event with enhanced surveillance, epidemiological and laboratory investigation, and scientific research.

ECDC published an updated [Rapid Risk Assessment](#) on 3 February 2015.

ECDC published a guidance document [Supporting diagnostic preparedness for detection of avian influenza A\(H7N9\) viruses in Europe](#) for laboratories on 24 April 2013.

Distribution of confirmed cases of A(H7N9) by four periods of reporting (weeks 07/2013 to 41/2016)



The Communicable Disease Threat Report may include unconfirmed information which may later prove to be unsubstantiated.