

This weekly bulletin provides updates on threats monitored by ECDC.

## I. Executive summary

### EU Threats

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

Opening date: 30 May 2016

Latest update: 19 August 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 those areas affected by West Nile fever (WNF) and identify significant changes in the epidemiology of the disease.

→ Update of the week

During the past week, 11 new cases of West Nile fever have been reported in the EU Member States:

- Spain reported one case in a French citizen who travelled to Andalusia. The exact place of infection is unknown and further investigation is ongoing.
- Romania reported one confirmed case in the already affected area Ilt, one confirmed case in newly affected Galati, one confirmed case and one probable case in newly affected Prahova and one probable case in newly affected Bucarest.
- Hungary has reported one confirmed case in Fejer, two confirmed cases in Pest, one confirmed case in Bekes and one confirmed case in Jasz-Nagykum-Szolnok.

In countries neighbouring the EU:

- Russia reported eight new cases, five cases in the already affected Saratovskaja Oblast and three cases in the newly affected Astrakhanskaja Oblast.
- Israel reported 11 new cases: one confirmed case in Jerusalem, three confirmed cases and one probable case in Haifa, two probable cases in Northern District, one confirmed case and one probable case in South District, one confirmed case and one probable case in Tel Aviv.
- Serbia reported two new cases in already affected areas of Belgrade (1) and Juzno-Banatski (1).

#### Malaria - Greece - 2016

Opening date: 20 November 2013

Latest update: 19 August 2016

Two autochthonous cases of malaria were reported in August 2016 in Greece in the municipality of Thessaloniki. Local control measures have been implemented in accordance with national guidelines.

→ Update of the week

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## Non EU Threats

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### Summer Olympic and Paralympic Games - Brazil - 2016

Opening date: 1 August 2016

Latest update: 19 August 2016

The 2016 Summer Olympic Games officially started in Brazil on 5 August 2016 and will last until 21 August, with more than 10 500 athletes from 205 countries participating. The 2016 Paralympics will take place from 7 to 18 September, involving 4 350 athletes from 176 countries. The Brazilian public health authorities have strengthened surveillance for this mass gathering event. As with previous events of this type, ECDC has enhanced its epidemic intelligence activities.

→Update of the week

On 14 August, [media](#) reported that an Irish cyclist developed bacterial pneumonia in Rio de Janeiro. In addition on 17 August, [media](#) reported that a TV presenter from the UK contracted malaria when travelling from the north of Brazil to Rio de Janeiro.

### Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015

Latest update: 19 August 2016

Since 1 February 2016, Zika virus infection and the related clusters of microcephaly cases and other neurological disorders have been declared to constitute a public health emergency of international concern (PHEIC). Since 2015, and as of 18 August 2016, WHO has reported 67 countries and territories with mosquito-borne transmission. As of 18 August 2016, 17 countries or territories have reported microcephaly and other central nervous system (CNS) malformations potentially associated with Zika virus infection or suggestive of congenital infection.

→Update of the week

#### USA

Ten new autochthonous cases have been reported in Florida since the last CDTR, bringing the number of locally transmitted cases to 35. The Florida department of Health (DOH) is continuing to investigate six cases that do not have an immediately evident link to the one square mile area in Miami-Dade County where they believe the local transmission is occurring. Health officials have been collecting and testing human samples, and mosquito abatement activities are underway in some of the areas of interest.

#### Guinea Bissau

Seven new cases were found to be positive for Zika. Of the mosquitoes collected, 80% were *Aedes aegypti* and *Aedes luteocephalus* which indicates that the risk index is high. Five cases of microcephaly have been reported since April 2016. Investigations of these cases are ongoing. The gene sequencing results of the four confirmed Zika cases sent on 1 July are still pending.

**Haiti** and **Guatemala** reported their first cases of babies born with microcephaly linked to Zika.

#### Publications

**JID**: According to entomological investigations in Mexico, Zika virus was isolated in three of 15 *Aedes aegypti* mosquito pools collected around patients' residence during a Zika outbreak in Tapachula (Chiapas State). This finding confirms *Aedes aegypti* as the principal vector for Zika virus in North America for the first time.

**WebMD**: According to CDC researchers, exposure to Zika virus in the third trimester can result in late-onset microcephaly in babies manifesting several months after they are born. These findings have not yet been published in a medical journal.

**NEJM**: Evidence for transmission of Zika virus by platelet transfusion.

### Yellow fever outbreak- Multistate (world) - Monitoring global outbreaks

Opening date: 17 March 2016

Latest update: 19 August 2016

An outbreak of yellow fever in Angola started in December 2015 in the municipality of Viana, Luanda province, and has spread to all 18 provinces of Angola. The outbreak later spread to the neighbouring Democratic Republic of Congo (DRC). Other countries (Brazil, Chad, Colombia, Ghana, Peru and Uganda) are currently reporting yellow fever outbreaks or sporadic cases which are not reported as linked to the Angolan outbreak.

→Update of the week

According to [WHO](#), the yellow fever epidemic in Angola appears to be declining, with no new cases confirmed in the last six weeks. According to the European Commission's Directorate-General for Humanitarian Aid and Civil Protection (ECHO), as of 8 August, there were 2 269 suspected cases and 74 confirmed cases reported in the Democratic Republic of Congo (DRC). WHO and partners launched a massive vaccination campaign in Kinshasa and along a high-traffic corridor between Angola and the DRC using fractional dosing of yellow fever vaccine (one-fifth the standard dose) to stretch the limited supply in an effort to cover 8 million of Kinshasa's 11 million inhabitants. Currently, only 2 million people in Kinshasa have been vaccinated against yellow fever.

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

Opening date: 15 June 2005

Latest update: 19 August 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

Three new laboratory-confirmed human case of avian influenza A(H5N1) virus infection were reported by WHO in their last update on 19 July, all three from Egypt.

The first case is a 2-year-old male from Cairo Governorate in Egypt who visited a family member who raised birds prior to onset of symptoms on 30 May 2016. The second case is a 30-year-old woman from Menia Governorate who had onset on 11 June and the third case is an 8-year-old girl from Cairo Governorate who had onset of symptoms on 18 June. These last two cases had exposure to poultry or poultry-related environments prior to illness.

## Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013

Latest update: 19 August 2016

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, and up to 18 August 2016, 798 cases have been reported to WHO, including at least 319 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

On 18 August 2016, China notified five additional cases of laboratory-confirmed human infection with avian influenza A(H7N9) virus, including one death. Disease onset of these cases was between 24 June and 29 July 2016. Two of the five cases had a history of exposure to poultry. The cases are from Fujian and Hebei provinces and Beijing. The cases reported from Hebei and Beijing are from the same family.

## Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005

Latest update: 19 August 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 WHO on 5 May 2014 due to concerns regarding the increased circulation and international spread of wild poliovirus during 2014. On 20 May 2016, at the ninth 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 eradicated worldwide.

### →Update of the week

After advance notification of WPV1 in Borno state, Nigeria, last week, two cases of WPV1 have now been officially reported to WHO, the first WPV cases since July 2014. Genetic sequencing of the isolated viruses suggest they are most closely linked to WPV1 last detected in Borno in 2011, indicating that the strain has been circulating without detection since that time. An outbreak response plan has begun, focusing on both Nigeria and the Lake Chad sub-region more broadly (specifically parts of Chad, northern Cameroon, southern Niger and the Central African Republic). Pakistan and Afghanistan have not recorded additional cases this week.

There were no new cVDPV cases reported last week. One new WPV1 environmental positive sample was reported in the past week in Pakistan.

## II. Detailed reports

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

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Opening date: 30 May 2016

Latest update: 19 August 2016

#### Epidemiological summary

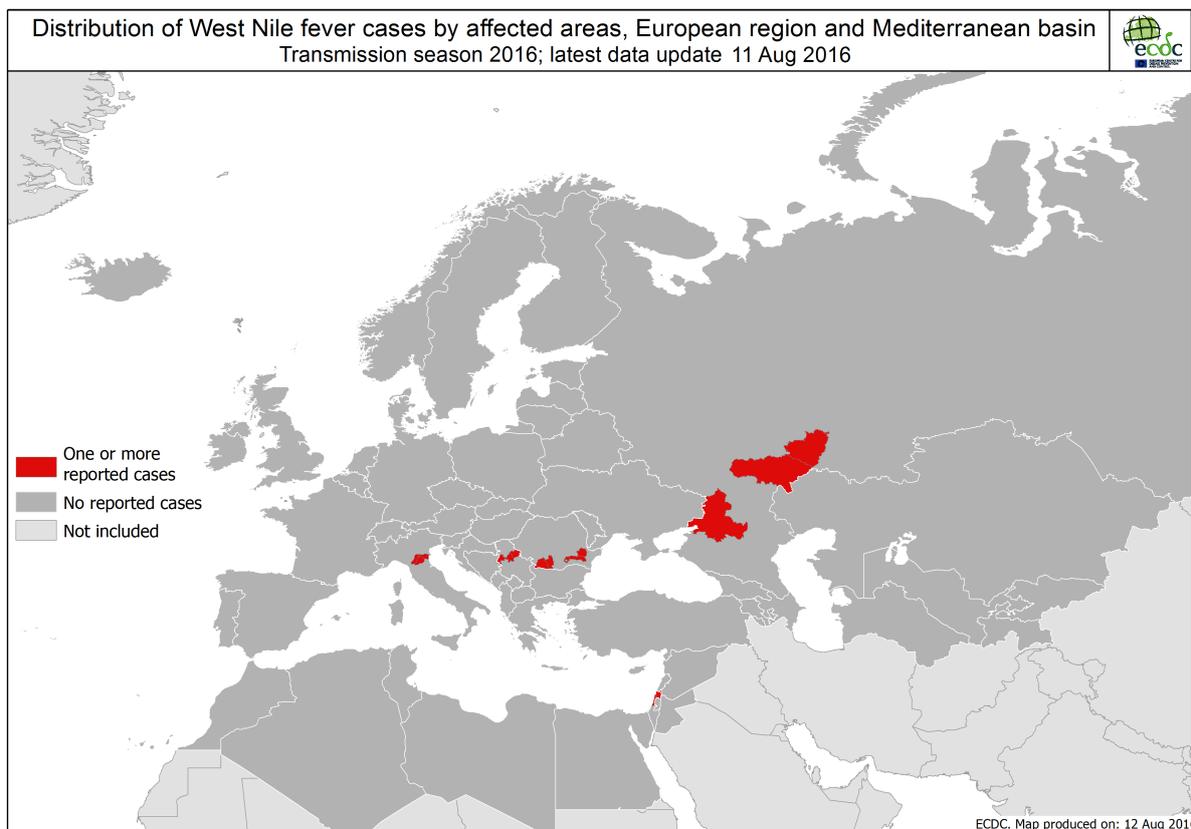
As of 18 August 2016, 22 cases of West Nile fever in humans have been reported in the EU Member States and 45 cases in the neighbouring countries, since the beginning of the 2016 transmission season.

#### ECDC assessment

West Nile virus infection in humans is a notifiable disease in the EU. National health authorities consider the implementation of control measures important for ensuring blood safety when human cases of West Nile fever occur. In accordance with the [EU blood directive](#), blood donors should be deferred from donation for 28 days after leaving a risk area of locally-acquired West Nile Virus unless an individual Nucleic Acid Test (NAT) is negative.

#### Actions

From week 22 onwards, ECDC produces weekly West Nile fever (WNF) maps during the transmission season (i.e. June to November) to inform blood safety authorities of WNF-affected areas.



## Malaria - Greece - 2016

Opening date: 20 November 2013

Latest update: 19 August 2016

### Epidemiological summary

On 12 August 2016, two cases of malaria were diagnosed in the Aghios Vasileios community in the Langadas municipality of Thessaloniki. Response measures are ongoing. Two previous possible locally acquired cases have been reported in the region of West Greece in 2016.

**Web sources:** [ECDC malaria page](#) | [KEELPNO malaria page](#) | [Eurosurveillance autochthonous Plasmodium vivax malaria Greece 2011](#)

### ECDC assessment

In Greece, locally acquired cases of malaria have been occurring since 2009, with the highest number reported in 2011 when 42 autochthonous *Plasmodium vivax* cases were notified, affecting five different regional units. A substantial decrease of locally acquired cases was observed in 2012, with 20 autochthonous *Plasmodium vivax* cases reported, following implementation of public health measures, such as systematic proactive and reactive case detection, strengthening of the surveillance system and improving the diagnosis capacity for malaria.

The conclusions of the previous [ECDC rapid risk assessment, October 2011](#), are still valid. The risk for travellers is considered to be low. The use of standard mosquito biting prevention measures continues to be recommended.

## Actions

ECDC published a [rapid risk assessment](#) in October 2011.  
The previous [epidemiological update](#) was posted in November 2013.

## Summer Olympic and Paralympic Games - Brazil - 2016

Opening date: 1 August 2016

Latest update: 19 August 2016

### Epidemiological summary

#### Host country - Brazil

In addition to the weekly summary, no further health events have been detected.

#### Europe and rest of the world

No major events related to Rio 2016 have been detected.

The Olympic Games officially started on 5 August 2016.

### ECDC assessment

Visitors to the 2016 Olympic and Paralympic Summer Games in Rio de Janeiro, Brazil will be most at risk of gastrointestinal illness and vector-borne infections. Therefore, they should ensure standard hygiene measures to reduce the risk of gastrointestinal illness and protect themselves against mosquito/other insect bites using insect repellent and by wearing long-sleeved shirts and trousers in regions where vector-borne diseases are endemic.

## Actions

ECDC published a [risk assessment](#) on 9 June 2016. ECDC is monitoring this event from 1 August until 23 September 2016 through epidemic intelligence.

## Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015

Latest update: 19 August 2016

### Epidemiological summary

#### EU/EEA imported cases:

Since week 45/2015, 19 countries (Austria, Belgium, the Czech Republic, Denmark, Finland, France, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the UK) have reported 1 265 travel-associated Zika virus infections through [The European Surveillance System \(TESSy\)](#). France reported 56% of the cases. Over the same time period, six countries reported 69 Zika cases among pregnant women.

#### EU's Outermost Regions and Territories

As of 18 August 2016:

*Guadeloupe:* 28 065 suspected cases have been detected, an increase of 730 suspected cases since last week. The weekly number of cases continues to decrease.

*French Guiana:* 9 460 suspected cases have been detected, an increase of 65 cases since last week. The weekly number of cases has been decreasing over the last four weeks.

*Martinique:* 34 960 suspected cases have been reported, an increase of 220 since last week. The weekly number of cases continues to decline.

*St Barthélemy*: 490 suspected cases have been detected, an increase of 50 suspected cases since last week. The weekly number of cases is still considered high.

*St Martin*: 1 975 suspected cases have been detected, an increase of 45 suspected cases since last week. The weekly number of cases has been continuously decreasing over the last five weeks.

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

As of 18 August 2016, microcephaly and other central nervous system (CNS) malformations associated with Zika virus infection or suggestive of congenital infection had been reported by 17 countries or territories. Brazil has reported the highest number of cases. Eighteen 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.

Since February 2016, 11 countries have reported evidence of person-to-person transmission of Zika virus, probably via a sexual route.

In the EU, Spain (2) and Slovenia (1) have reported congenital malformations associated with Zika virus infection after travel in the affected areas. Cases have also been detected in the EU's Outermost Regions and Territories in Martinique, French Guiana and French Polynesia.

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

### ECDC assessment

The spread of the Zika virus epidemic in the Americas 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 is available [here](#). 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 published an updated [Rapid Risk Assessment](#) on 12 July 2016.

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

## Yellow fever outbreak- Multistate (world) - Monitoring global outbreaks

Opening date: 17 March 2016

Latest update: 19 August 2016

### Epidemiological summary

In **Angola**, since 5 December 2015 and as of 5 August 2016, WHO reports 3 867 suspected cases, 879 of which were laboratory-confirmed. There were 369 (CFR 9.7%) deaths among the suspected cases and 119 (CFR 13.5%) among the confirmed cases. Local transmission has been documented in 45 districts across 12 provinces. No laboratory-confirmed cases of yellow fever have been reported in Luanda or Huambo since May.

Since the start of the year and as of 8 August 2016, the **Democratic Republic of Congo (DRC)** has reported 2 269 suspected and 74 confirmed cases (56 cases imported from Angola, 12 autochthonous, three sylvatic and three still being investigated), according to the latest [ECHO report](#). The number of reported fatalities among the confirmed cases is 16 (21.6%). Confirmed cases have been reported mainly in Kinshasa (17), Kongo Central (37) and Kwango (16). Sylvatic cases were reported in Bas Uele (1), Kasai (1) and Tshuapa (1). Recently Lualaba province reported one imported case.

**Web sources:** [ECDC factsheet / WHO yellow fever page](#) | [WHO AFRO](#) | [WHO-DRC](#) | [PAHO](#) | [MoH Peru](#) | [ECDC updated risk assessment](#) | [DRC Health Cluster bulletin](#) | [PAHO update 26 July](#) |

## ECDC assessment

Yellow fever in an urban setting is a public health emergency that may result in a large number of cases. The outbreak in Angola appears to be declining, with no new confirmed cases in the last six weeks. In the DRC, control efforts are still ongoing. The risk of continuous spread in affected and non-affected countries across West-Central and East Africa is one of the main challenges with regard to control of the epidemic.

In Europe, the *Aedes aegypti* mosquito is present on the island of Madeira, Portugal. In week 32, vector activity is still considered low in Madeira according to the latest entomological situation report published by [local health authorities](#).

## Actions

ECDC published new [mosquito maps](#) on 3 August showing the geographical distribution of *Aedes* mosquitoes in Europe.

ECDC published an updated [risk assessment](#) on 14 July 2016.

ECDC published a [report on the assessment of yellow fever in Angola](#) on 5 July 2016.

An [EU mobile lab](#) has been deployed in the DRC under the European Medical Corps since 19 July 2016.

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

Opening date: 15 June 2005

Latest update: 19 August 2016

### Epidemiological summary

From 2003 to 21 July 2016, 854 laboratory-confirmed cases of human infection with avian influenza A(H5N1) virus, including 450 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

The identification of sporadic cases in Egypt is not unexpected because avian influenza A(H5N1) viruses are known to be circulating in poultry in the country.

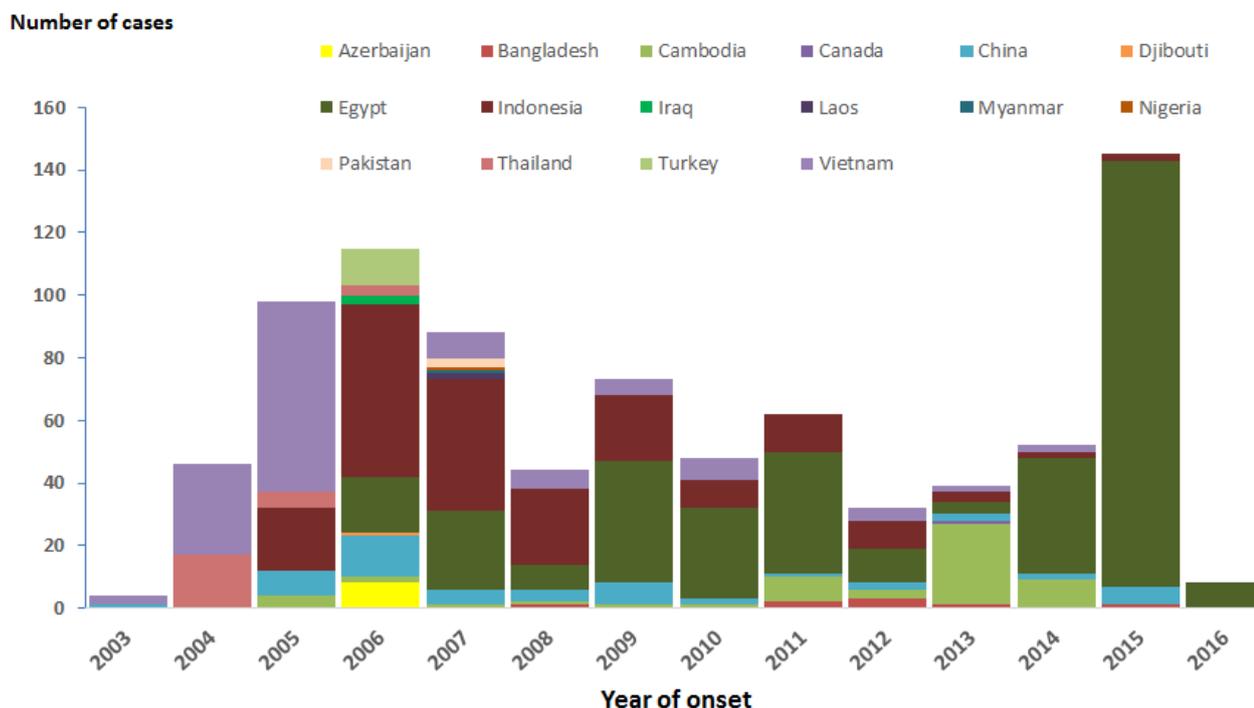
When avian influenza viruses circulate in poultry, sporadic infections or small clusters of human cases are possible among people exposed to infected poultry or contaminated environments, especially in households and at live bird markets. The viruses remain poorly adapted to humans and transmission from birds to humans is infrequent. Only limited clusters of human cases have been reported since the first human epidemics 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 influenza A(H5N1) by country of reporting

ECDC: Adapted from WHO figures



## Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013

Latest update: 19 August 2016

### Epidemiological summary

On 18 August, WHO reported five new influenza A(H7N9) cases in China. The cases are from Fujian and Hebei provinces and Beijing. The cases reported from Hebei and Beijing are from the same family and human-to human transmission cannot be ruled out. However, to date, no further transmission has been reported.

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). Three imported cases have also been reported: one in Malaysia and two in Canada.

**Web sources:** [Chinese CDC](#) | [WHO](#) | [WHO FAQ page](#) | [ECDC](#) | [WHO avian influenza updates](#)

### 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

9/12

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 34/2016)

ECDC



## Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005

Latest update: 19 August 2016

### Epidemiological summary

In 2016, 21 cases of wild poliovirus type 1 (WPV1) have been reported so far, compared with 36 for the same period in 2015. The cases were detected in Pakistan (13), Afghanistan (6) and Nigeria (2). As of 17 August 2016, three cases of circulating vaccine-derived poliovirus (cVDPV) have been reported to WHO in 2016, all from Laos. There were 12 cVDPV cases during the same period in 2015.

**Web sources:** [Polio eradication: weekly update](#) | [MedISys Poliomyelitis](#) | [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 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.

Following the detection of the cases of circulating vaccine-derived poliovirus type 1 in Ukraine, ECDC published a rapid risk assessment on its [website](#).

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