

This weekly bulletin provides updates on threats monitored by ECDC.

## I. Executive summary

### EU Threats

#### **New! Measles - Romania - 2016**

Opening date: 7 November 2016

Latest update: 11 November 2016

Measles, a highly transmissible vaccine-preventable disease, is still endemic in some EU countries where vaccination uptake remains below the level required to interrupt the transmission cycle. In 2016, from the beginning of the current epidemic to 7 November, 935 measles cases were reported in 30 out of 42 districts in Romania. Six deaths have been notified. Vaccination activities are ongoing in order to cover communities with suboptimal vaccination coverage. As of the beginning of November, 3 049 children have been vaccinated.

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

Opening date: 13 October 2016

Latest update: 11 November 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

During the past week, the activity remained low in the region.

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

Opening date: 30 May 2016

Latest update: 11 November 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 no new cases have been reported in EU Member States and two cases have been reported in neighbouring countries.

Israel reported two new cases in the already affected areas of Tel Aviv and Southern district.

## Non EU Threats

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

Opening date: 16 November 2015

Latest update: 11 November 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 10 November 2016, there have been 71 countries and territories reporting mosquito-borne transmission of the virus. According to WHO and as of 9 November 2016, 26 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, 15 new locally-acquired cases have been reported in Florida since the last CDTR. Additionally, 19 cases have been reported, following a [change](#) in the CDC national Zika case definition on 9 November.

Montserrat has been designated as high risk for Zika transmission on the Public Health England [website](#) and has been added to the ECDC map.

On 8 November, [Palau](#) reported the first autochthonous Zika case.

ECDC Zika map: Montserrat and Palau have been displayed on the map as countries with sporadic transmission. In addition, Turks and Caicos Islands and British Virgin Islands have changed the status to widespread transmission.

### Invasive infection by *Mycobacterium chimaera* 2014 -2016 - Multistate Europe

Opening date: 9 April 2015

Latest update: 11 November 2016

Since 2011, cases of invasive cardiovascular infection caused by *Mycobacterium chimaera* have been detected in patients having previously undergone open heart surgery in Switzerland, the Netherlands, Germany and the UK. Microbiological investigation of water samples from the heater-cooler units, and air samples when the device is in operation, indicated that aerosolisation of water from the heater-cooler units (3T, LivaNova – Sorin) used for temperature regulation during extracorporeal circulation in the operating room is the most likely route of infection.

#### →Update of the week

In October 2016, whole genome sequencing results demonstrated that *M. chimaera* isolates from patients with heater-cooler associated infections and from the 3T heater-cooler devices from several U.S. hospitals (in Pennsylvania and Iowa) are all highly related to each other. In view of these results the US Food and Drug administration (FDA) updated the Safety Communication and CDC published a health alert on *M. chimaera* associated with LivaNova - Sorin 3T heater-cooler units. FDA recommends the removal of the contaminated devices from service, and considering transitioning away from the use of these devices until the manufacturer implements strategies to mitigate the risks of infection.

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

Opening date: 8 September 2005

Latest update: 11 November 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

During the past week four new cases of wild poliovirus was reported, one in Pakistan and three in Afghanistan. No new circulating vaccine-derived poliovirus (cVDPV) were reported in the past week. Three new WPV1 positive environmental samples were reported in the past week in Pakistan.

On 11 November, the WHO Director-General will convene the eleventh meeting of the International Health Regulations (IHR) Emergency Committee for poliomyelitis.

## II. Detailed reports

### New! Measles - Romania - 2016

Opening date: 7 November 2016

Latest update: 11 November 2016

#### Epidemiological summary

Since the beginning of the current measles epidemic until 4 November, Romania has reported 935 confirmed cases in 30 out of 42 districts. Six deaths have been notified, three children under one year, one one-year-old child with severe dystrophy, one adolescent with chronic liver disease and one HIV-positive young adult. The most affected group are children under one year (incidence rate = 86,5/100 000), followed by the 1 - 4 years age group (incidence rate = 55,9/100 000) and then by the 5 - 9 years age group (incidence rate = 15,2/100 000).

As of the beginning of November, 3 049 children aged 1-15 years have been vaccinated.

SOURCES: EPIS VPD | [MoH Romania](#)

#### ECDC assessment

Measles is a highly infectious disease and frequently results in widespread outbreaks, mainly among unvaccinated individuals. Measles can be complicated by pneumonia, otitis media, laryngotracheo-bronchitis; and diarrhoea occurs commonly in young children. Case-fatality rates increase in children younger than five years of age and immuno-compromised persons, including individuals with leukaemia, AIDS and severe malnutrition. Measles remains one of the leading causes of mortality in young children although a safe and cost-effective vaccine has been available for decades. Although improvements have been made to control measles in Europe, large-scale outbreaks have still recently been observed. The last notable measles outbreak in Romania was in 2012 with 8 230 cases.

#### Actions

ECDC will continue to monitor this event.

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

Opening date: 13 October 2016

Latest update: 11 November 2016

#### Epidemiological summary

**Week 44/2016** (31 October–6 November 2016):

The activity remained low in the region, with few samples testing positive for influenza viruses (1% of sentinel samples), and is at levels similar to that observed for the same period in recent seasons.

Since week 40/2016, influenza A viruses have predominated, with most of those subtyped being A(H3N2).

#### Global update

As of mid-October, influenza activity in temperate southern hemisphere countries continued to decrease or remained low. Influenza activity in the temperate zone of the northern hemisphere remained at inter-seasonal levels.

#### 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: 11 November 2016

### Epidemiological summary

Since the beginning of the 2016 transmission season and as of 11 November 2016, 206 cases of West Nile fever in humans have been reported in EU Member States. A total of 263 cases was reported from neighbouring countries.

**Source:** [ECDC WNF page](#) | [MoH Israel](#)

### ECDC assessment

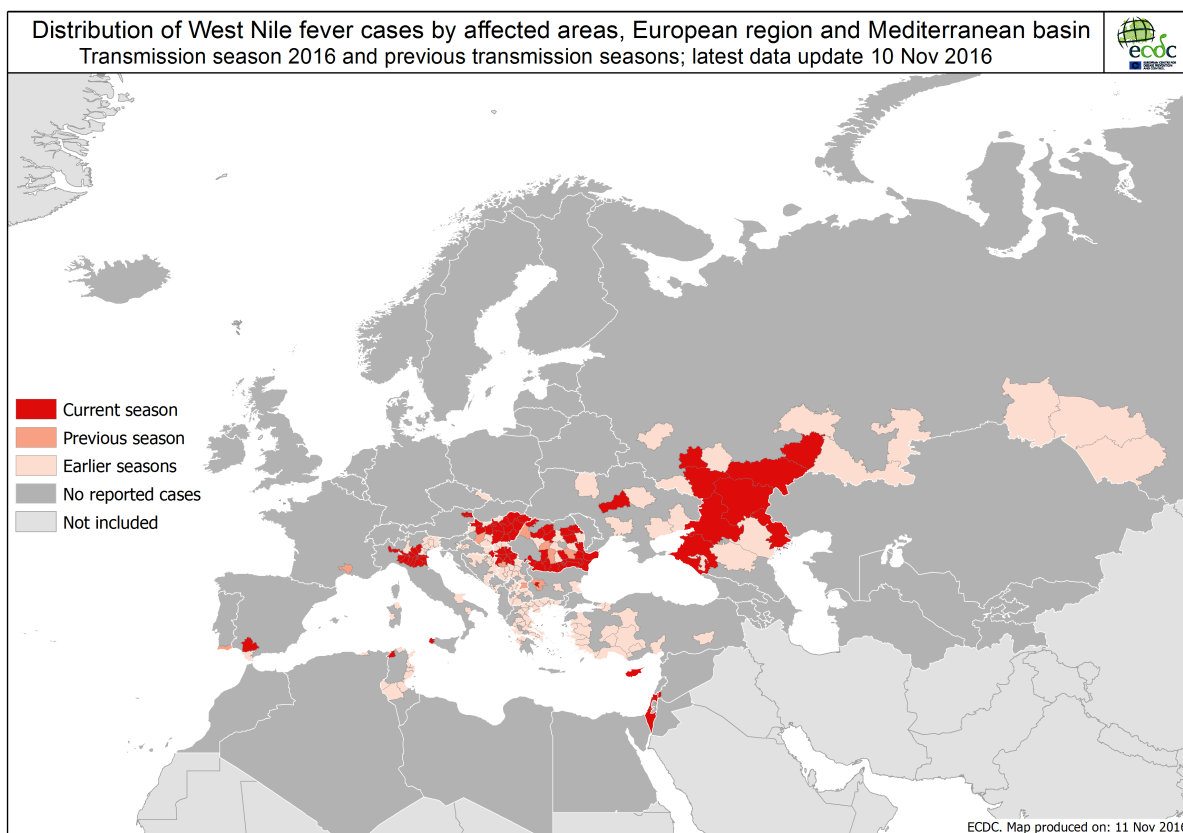
As expected at this time of the year, the weekly number of cases has started to decrease.

### 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.

## Distribution of West Nile fever cases by affected areas, European region and Mediterranean basin

ECDC



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

Opening date: 16 November 2015

Latest update: 11 November 2016

### Epidemiological summary

#### 1. Update on number of cases

##### USA

In the USA, 15 new locally-acquired cases have been reported in Florida since the last CDTR. Additionally, 19 cases have been reported, following a change in the CDC national Zika case definition on 9 November. To date, 222 locally-acquired and 915 imported cases of Zika have been reported in Florida.

##### EU/EEA imported cases

Since July 2015 (week 26), 20 countries (Austria, Belgium, the Czech Republic, Denmark, Finland, France, Hungary, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom) have reported 1 967 travel-associated Zika virus infections through The European Surveillance System (TESSy). Over the same

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time period, eight EU countries reported 95 Zika cases among pregnant women.

### EU's Outermost Regions and Territories

As of epidemiological week 42, the overall number of cases has been decreasing in all the French Outermost Territories with 40 suspected cases reported in Martinique, 30 in French Guiana, 50 in Guadeloupe, 30 in St Barthelemy, 40 in St Martin.

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 10 November 2016, microcephaly and other central nervous system (CNS) malformations associated with Zika virus infection or suggestive of congenital infection have been reported by 26 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 28 October 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.

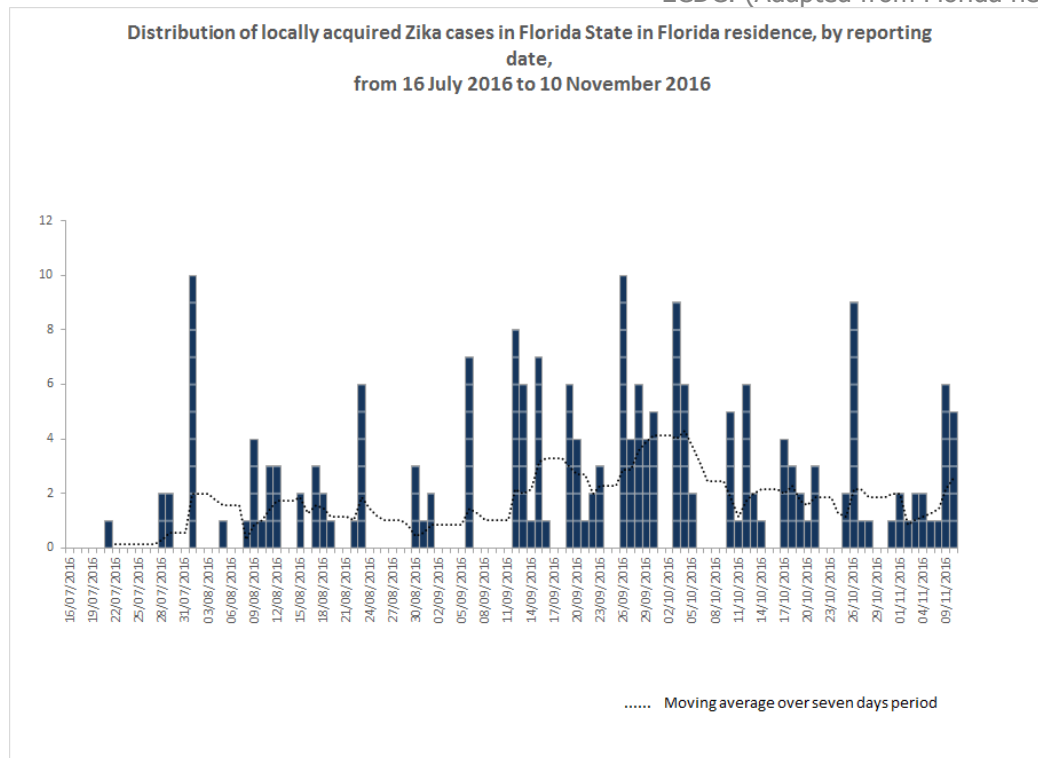
### Actions

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 levels (NUTS3).

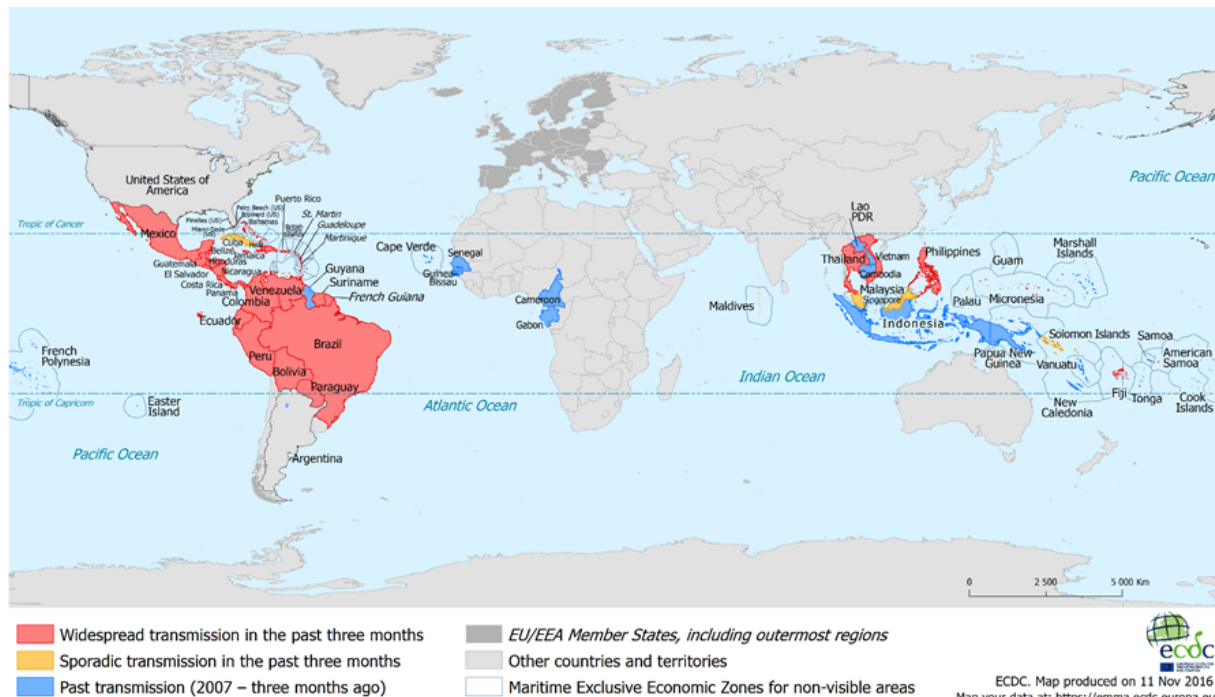
Distribution of locally acquired Zika cases in Florida State (US), by reporting date, from 16 July 2016 to 10 November 2016

ECDC: (Adapted from Florida health department and media)



## Countries or territories with reported confirmed autochthonous cases of Zika virus infection in the past three months, as of 11 November 2016

ECDC



## Invasive infection by *Mycobacterium chimaera* 2014 -2016 - Multistate Europe

Opening date: 9 April 2015

Latest update: 11 November 2016

### Epidemiological summary

Since 2011, cases of invasive cardiovascular infection caused by *M. chimaera* have been detected in patients having previously undergone open heart surgery in Switzerland, the Netherlands, Germany and the UK. Microbiological investigation of water samples from the heater-cooler units and air samples when the device is in operation indicated that aerosolisation of water from the heater-cooler units (3T, LivaNova – Sorin) used for temperature regulation during extracorporeal circulation in the operating room is the most likely route of infection. Environmental investigation at the manufacturing facility and of newly produced devices identified contamination by *M. chimaera*. In late 2015, open-heart surgery patients infected with *M. chimaera* were identified in Pennsylvania and Iowa, USA. On 29 December 2015, FDA published a warning letter to the manufacturer of the heater-cooler devices, addressing a list of serious shortcomings, and in June 2016 published a first safety communication.

**Web sources:** [ECDC rapid risk assessment](#) | [Clinical Infectious Diseases Journal](#) | [German Federal Institute of Medicines and Medicinal Products](#) | [UK authorities](#) | [US FDA](#)

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## ECDC assessment

The molecular analysis results from the US strongly support the link between the 3T heater-cooler units and the *M. chimaera* infections, as well as the hypothesis of a common source of contamination of the HCUs at the manufacturing facility, as indicated also by preliminary typing results from clinical and environmental isolates in Europe.

## Actions

Since April 2015, ECDC has maintained close contact with the public health agencies, clinical and laboratory experts as well as regulatory authorities in Europe and the U.S. with regular teleconferences and exchange of information through the Epidemic Intelligence Information System for antimicrobial resistance and healthcare-associated infections (EPIS AMR-HAI). ECDC also provided a protocol for case detection and laboratory testing of human and environmental samples. Across Europe, through actions of the national public health and regulatory authorities, healthcare professionals have been informed of the risks associated with heater-cooler units (HCUs) and several preventive measures have been proposed, including relocation of the HCUs out of the operating theatre or placement of the HCUs in special casing.

ECDC published a [Rapid Risk Assessment](#) on 30 April 2015 which will be updated in November 2016.

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

Opening date: 8 September 2005

Latest update: 11 November 2016

### Epidemiological summary

As of 9 November 2016, 32 cases of WPV1 have been reported to WHO in 2016, compared with 52 for the same period in 2015. The cases were detected in Pakistan (16), Afghanistan (12) and Nigeria (4). Three cases of cVDPV have been reported in 2016, compared with 19 for the same period in 2015. The three cases were all reported from 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

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

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.

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