I. Executive summary

EU Threats

New! Outbreak of Enterovirus A71 - Catalonia, Spain - 2016
Opening date: 30 May 2016 Latest update: 3 June 2016
An outbreak of enterovirus with neurological complications caused by enterovirus A71 has been ongoing in Catalonia since mid-April 2016 affecting children. As of 31 May, 73 cases of enterovirus infection with neurological complications have been reported, most of which have evolved favourably. The cases are widespread in Catalonia. No cases have been identified from other areas in Spain so far.

New! West Nile virus - Multistate (Europe) - Monitoring season 2016
Opening date: 30 May 2016 Latest update: 3 June 2016
During the June to November transmission season, ECDC monitors the situation in EU Member States and neighbouring countries in order to inform blood safety authorities of WNF-affected areas and identify significant changes in the epidemiology of the disease.

⇒ Update of the week
This week ECDC started the seasonal monitoring of West Nile fever and the first West Nile maps for the 2016 transmission season will be published today. As of 2 June, no human cases of West Nile fever have been reported in the EU and neighbouring countries.

UEFA EURO 2016 - mass gathering - France
Opening date: 23 May 2016 Latest update: 3 June 2016
The UEFA football cup will take place from 10 June until 10 July 2016 in ten venues in France. Twenty-four European teams will participate. The majority of the participating teams are from EU countries with the exception of Ukraine, Turkey, Switzerland, Albania and Russia. ECDC will enhance epidemic intelligence activities to target communicable disease-related events that may occur during the games by starting to monitor them on the week prior to the event and until one week after its end.
Non EU Threats

New! Plasmid-mediated colistin resistance mechanism MCR-1 in Gram-negative bacteria - Multistate (world) - 2016
Opening date: 30 May 2016  Latest update: 3 June 2016
On 26 May 2016, the Journal of Antimicrobial Agents and Chemotherapy published the first report of detection of the mcr-1 gene from a human sample in the USA. The mcr-1 and ESBL-carrying Escherichia coli isolate was cultured from the urine sample of a 49 year-old female patient who presented to a clinic in Pennsylvania with symptoms of a urinary tract infection. The patient reported no travel history within the prior five months. The first detection of plasmid-mediated resistance to polymyxins (MCR-1) in China has been reported in an article in Lancet Infectious Diseases on 18 November 2015.

Public health risks - Multistate - Refugee movements
Opening date: 4 November 2015  Latest update: 3 June 2016
Europe is experiencing its largest influx of refugees since the Second World War. According to the UN Refugee Agency (UNHCR), more than one million refugees arrived in Europe in 2015 and around 150 000 in 2016. To date, there have been reports of cases of acute respiratory tract infections, louse-borne relapsing fever, cutaneous diphtheria, scabies, measles, meningococcal meningitis, shigellosis, typhoid fever, hepatitis A, tuberculosis and malaria among refugees. While these cases do not represent a significant disease burden for the host countries, the diseases pose a potential threat, particularly to the health of the refugees themselves.

Zika - Multistate (world) - Monitoring global outbreaks
Opening date: 16 November 2015  Latest update: 3 June 2016
As of 3 June 2016, 51 countries and territories have reported autochthonous cases of Zika virus infection during the past nine months. On 1 February 2016, WHO declared that Zika virus infection and the related clusters of microcephaly cases and other neurological disorders constitute a public health emergency of international concern (PHEIC). There is now a scientific consensus that Zika virus is a cause of microcephaly and Guillain-Barré syndrome. Given this scientific consensus on the evidence of adverse pregnancy outcomes associated with Zika virus infection, ECDC recommends that pregnant women postpone non-essential travel to Zika-affected areas.

Yellow fever outbreak- Multistate (world) - Monitoring global outbreaks
Opening date: 17 March 2016  Latest update: 3 June 2016
An outbreak of yellow fever in Angola started in December 2015 in the municipality of Viana, Luanda province and spread to all 18 provinces of Angola. A mass immunisation campaign is taking place. The neighbouring Democratic Republic of Congo (DRC) reports both imported and autochthonous cases of yellow fever. An outbreak of yellow fever not linked to the outbreak in Angola has been reported in several districts in Uganda.
According to the latest WHO situation report, the outbreaks of yellow fever in Angola, DRC and Uganda are ongoing. Since the last situation report on 22 May 2016, a further 357 suspected cases, 41 confirmed cases and 24 fatal cases have been notified in Angola. In DRC, four additional confirmed cases have been reported, and in Uganda, eight additional suspected cases.

A further three countries have reported suspected cases of yellow fever: Republic of Congo (one case), Sao Tome and Principe (two cases) and Ethiopia (22 cases). Investigations are ongoing to identify the vaccination status of the cases and determine if they are linked with Angola.

In Peru, up to the week to 8 May, there were 43 suspected cases of yellow fever reported in six departments, with four deaths. Of the reported cases, 14 were confirmed. Most cases are reported from Junin department. The number of confirmed and probable cases reported in Peru from the beginning of 2016, exceeds twice the total annual number of cases reported in the previous two years. This event is not related to the Angolan outbreak. The risk of geographical spread of to the pacific coast is unlikely.

In Brazil, sporadic yellow fever cases have occurred in individuals without a history of yellow fever vaccination who were exposed to the virus circulating in historically endemic areas. In March 2016 one fatal case has been reported in Sao-Paulo state.

**Ebola Virus Disease Epidemic - West Africa - 2014 - 2016**

Opening date: 22 March 2014  
Latest update: 3 June 2016

The largest-ever epidemic of Ebola virus disease (EVD) affected West Africa from December 2013 to January 2016, mainly affecting Guinea, Liberia and Sierra Leone. On 8 August 2014, WHO declared the Ebola epidemic in West Africa a Public Health Emergency of International Concern (PHEIC). As of 11 May 2016, WHO has reported 28 616 cases of Ebola virus disease related to the outbreak in West Africa, including 11 310 deaths. Sierra Leone was declared Ebola-free by WHO on 7 November 2015, Guinea on 29 December 2015 and Liberia on 14 January 2016. On 29 March 2016, WHO declared the end of the PHEIC and advised that all temporary recommendations previously adopted should now be terminated. However, since the end of February 2016 up to 10 April, there have been ten cases reported in Guinea and three in Liberia.

Update of the week

There have been no new cases reported since 10 April. The 42-day (two incubation periods) countdown elapsed for Guinea and the outbreak was declared over on 31 May 2016. For Liberia the countdown will end on 9 June 2016.

**Dengue - Multistate (world) - Monitoring seasonal epidemics**

Opening date: 20 April 2006  
Latest update: 3 June 2016

Dengue fever is one of the most prevalent vector-borne diseases in the world. It affects an estimated 50 to 100 million people each year, mainly in the tropical regions of the world. The identification of sporadic autochthonous cases in non-endemic areas in recent years has already highlighted the risk of locally-acquired cases occurring in EU countries where the competent vectors are present.

Update of the week

There are several ongoing outbreaks of dengue fever across the globe.

**Chikungunya- Multistate (world) - Monitoring global outbreaks**

Opening date: 9 December 2013  
Latest update: 3 June 2016

Chikungunya virus infections are reported from increasingly wider areas of the world. An outbreak of chikungunya virus infection started in the Caribbean in December 2013, later spreading to the Americas and the Pacific region. In 2015, there remained ongoing outbreaks in these regions (especially in the Pacific region), but at a lower level compared with the same period last year. So far this year, no autochthonous cases of chikungunya virus infection have been detected in Europe. Introduction of the disease in Europe in areas where there is a competent vector is possible.

Update of the week

Ongoing outbreaks are reported in the Caribbean, the Americas and the Pacific region.
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) on 5 May 2014 due to concerns regarding the increased circulation and international spread of wild poliovirus during 2014. On 1 March 2016, 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
During the past week, no poliovirus cases were reported.
II. Detailed reports

**New! Outbreak of Enterovirus A71 - Catalonia, Spain - 2016**

**Opening date: 30 May 2016**

**Latest update: 3 June 2016**

**Epidemiological summary**

An outbreak of enterovirus with neurological complications caused by enterovirus A71 has been ongoing in Catalonia since mid-April 2016 affecting children. As of 31 May, 73 cases of enterovirus infection with neurological complications have been reported, most of which have evolved favourably. The cases are widespread in Catalonia. No cases have been identified from other areas in Spain so far.

**Web sources:** [Department of Health, Catalonia](#) | Media

**ECDC assessment**

Enterovirus A71 (EV-A71) is a major cause of hand, foot and mouth disease (HFMD) and is particularly prevalent in parts of Southeast Asia, affecting thousands of children and infants each year. EV-A71 infection is transmitted from person to person by direct contact with nose and throat discharges, saliva, fluid from blisters, or the stool of infected persons. The illness is contagious during the acute stage and perhaps longer, as faecal shedding of the virus can continue for several weeks. Incubation period ranges from 3 to 7 days. It is the most neuropathogenic nonpolio enterovirus in humans, causing a variety of neurological diseases including aseptic meningitis, encephalitis and poliomyelitis-like paralysis. Large outbreaks have been reported in Malaysia, Taiwan, Mainland China, Singapore, Australia. In Europe, EV-A71 commonly causes asymptomatic infection and is only occasionally associated with severe neuroinfection. The last epidemics of EV-A71 infection in Europe occurred during 1975 in Bulgaria with over 705 cases, of which 149 cases developed paralysis, and 44 deaths. Hungary experienced an outbreak of EV-A71 in 1978 with 323 cases (13 poliomyelitis-like paralysis, 145 encephalitis, 161 aseptic meningitis, 4 hand, foot and mouth disease).

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

**Opening date: 30 May 2016**

**Latest update: 3 June 2016**

**Epidemiological summary**

As of 2 June, no human cases of West Nile fever have been reported in the EU and neighbouring countries.

**ECDC assessment**

West Nile fever in humans is a notifiable disease in the EU. The implementation of control measures are considered important for ensuring blood safety by the national health authorities when human cases of West Nile fever occur. According to the EU blood directive, efforts should be made to defer blood donations from affected areas with ongoing virus transmission.

**Actions**

From week 22 onwards, ECDC is producing weekly West Nile fever (WNF) risk maps during the transmission season (June-November) to inform blood safety authorities regarding WNF affected areas.
UEFA EURO 2016 - mass gathering - France
Opening date: 23 May 2016  Latest update: 3 June 2016

Epidemiological summary

ECDC assessment
Mass gathering events involve a large number of visitors present in an area at the same time. This may increase the risk of communicable disease outbreaks and non-communicable health risks, including heat stroke, crowd injury and drug- and alcohol-related conditions.

Actions
During June 2016, ECDC will undertake enhanced event-based daily surveillance as part of its routine epidemic intelligence activities. The epidemic intelligence team will adapt the media screening tools and its daily procedures to assist detecting infectious disease threats in hosting and participating countries which are relevant for the event. Detected events requiring further attention will be reported through the weekly CDTR.
The UEFA football cup venues in France 10 June - 10 July 2016

New! Plasmid-mediated colistin resistance mechanism MCR-1 in Gram-negative bacteria - Multistate (world) - 2016
Opening date: 30 May 2016 Latest update: 3 June 2016

Epidemiological summary

The first detection of plasmid-mediated resistance to polymyxins (MCR-1) in China has been reported in an article in Lancet Infectious Diseases on 18 November 2015. Plasmid carriage of the mcr-1 gene in E. coli isolates was confirmed in 78 (15%) of 523 samples of raw meat, 166 (21%) of 804 animals between 2011 and 2014, as well as in 16 (1%) of 1 322 human clinical samples from inpatients with infection. The authors hypothesise that plasmid-mediated colistin resistance originated in animals and subsequently spread to humans.

EU-EEA
On 3 December 2015, Denmark after having re-examined the genome of approximately 3 000 E. coli in a whole genome sequencing database reported the detection of one E. coli isolate with the mcr-1 gene in a Danish patient with bloodstream infection in 2015. In addition, the mcr-1 gene was also detected in five E. coli isolates from imported chicken meat from 2012-2014. According to Lancet correspondence published on 17 December 2015, Portugal has found the MCR-1 gene in a Salmonella isolate from 2011 and France detected the MCR-1 gene in four Salmonella isolates from 2012-2013. In the Netherlands this type of colistin resistance was detected in six isolates of Dutch travellers and on 10 February 2016, the Swedish public health authorities reported that the mcr-1 gene has been detected in intestinal E. coli in stool samples from two travellers after return from Asia. Further mcr-1 positive isolates detected in clinical samples have been reported from Germany, Italy, Spain, Switzerland and the United Kingdom.

Outside EU-EEA
On 26 May 2016, the Journal of Antimicrobial Agents and Chemotherapy published the first report of detection of mcr-1 gene from a human sample in the USA. The mcr-1 and ESBL-carrying Escherichia coli isolate was cultured from the urine sample of a 49 year-old female patient who presented to a clinic in Pennsylvania with symptoms of a urinary tract infection. The patient reported no travel history in the previous five months. Previously, there had also already been reports of the detection of mcr-1 in isolates from South-East Asia, Africa and South America.

Source: AAC | Eurosurveillance | EMA | Lancet | ScienceDirect
**ECDC assessment**

Colistin is primarily used to treat multidrug-resistant Gram-negative infections, and development of colistin resistance due to interspecies/interstrain transfer of the *mcr-1* gene will further severely limit treatment options, and even potentially result in untreatable infections. In the six months since its description in November 2015, the *mcr-1* gene has already been detected in human, animal, food and environmental samples from multiple countries.

**Actions**

ECDC is monitoring this event through the ARHAi network and through epidemic intelligence and is preparing a rapid risk assessment on plasmid-mediated colistin resistance.

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**Public health risks - Multistate - Refugee movements**

Opening date: 4 November 2015  
Latest update: 3 June 2016

**Epidemiological summary**

Emerging episodes of communicable diseases have been reported to affect the refugee population, including acute respiratory tract infections, louse-borne relapsing fever, cutaneous diphtheria, scabies, measles, meningococcal meningitis, shigellosis, typhoid fever, hepatitis A, tuberculosis and malaria.

**ECDC assessment**

Refugees are currently not a threat to Europe with respect to communicable diseases, but they are a priority group for communicable disease prevention and control efforts as they are more vulnerable.

**WHO, UNHCR and UNICEF** jointly recommend that refugees, asylum seekers and migrants should have non-discriminatory, equitable access to healthcare services, including vaccines, irrespective of their legal status. They should be provided with timely immunisation against vaccine-preventable diseases, particularly measles and polio. All countries should have effective disease surveillance and reporting systems, outbreak investigation ability and case management and response capacity.

The risk to European residents of being affected by outbreaks occurring among refugee populations remains extremely low.

**Actions**

Two EPIET fellows were currently deployed to Greece to support communicable disease surveillance and response operations.

An **ECDC expert opinion** on the public health needs of irregular migrants, refugees or asylum seekers across the EU’s southern and south-eastern borders was published on the ECDC website in September 2015.

ECDC prepared:

- an **RRA** on the risk of communicable disease outbreaks in refugee populations in the EU/EEA
- an updated **RRA** on louse-borne relapsing fever amongst migrants in the EU/EEA
- an **RRA** on cutaneous diphtheria among recently arrived refugees and asylum seekers in the EU
- an **RRA** on the risk of importation and spread of malaria and other vector-borne diseases associated with the arrival of migrants in the EU
- an **RRA** on shigellosis among refugees in the EU.
ECDC, in collaboration with Member States, the European Commission and WHO, continues to closely monitor the situation to rapidly identify and assess potential communicable disease threats.

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

**Epidemiological summary**

**EU/EEA imported cases:**
As of 3 June 2016, ECDC has recorded 728 imported cases in 19 EU/EEA countries. Forty-one of the imported cases are pregnant women. In addition, one confirmed case was published following the diagnosis in a Slovenian hospital. The number of imported cases reported is not based on a systematic reporting surveillance system hence cannot be considered exhaustive.

**EU’s Outermost Regions and Territories:**
- **Martinique:** As of 2 June 2016, 27 800 suspected cases have been reported, an increase of 1 150 since last week. Two microcephaly cases and two additional congenital malformations have been reported with confirmed Zika virus infection. In addition, 21 cases with GBS have been detected. Among these, 19 have been confirmed with Zika virus infection.
- **French Guiana:** As of 2 June 2016, 7 200 suspected cases have been reported, an increase of 490 since last week. Three cases with GBS have been identified since the beginning of the outbreak.
- **Guadeloupe:** As of 2 June 2016, 7 830 suspected cases have been reported, an increase of 1 510 suspected cases since last week. Two cases with severe neurological complications have been reported.
- **St Martin:** As of 2 June 2016, 530 suspected cases have been reported, an increase of 105 suspected cases since last week. One case with neurological complications has been reported.
- **St Barthélemy:** As of 2 June 2016, 40 suspected cases have been reported, an increase of 15 suspected cases since last week.

**Update on the observed increase of congenital Zika syndrome and other neurological complications:**
In the context of Zika virus circulation, 13 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. Brazil: Since October 2015 and as of 28 May 2016, Brazil has reported 7 723 suspected cases of microcephaly and other nervous system disorders suggestive of congenital infection from 27 states in the federation. Of these cases, 1 489 are confirmed cases, 223 of which are laboratory-confirmed. This is an increase of 100 suspected cases and 15 confirmed cases of microcephaly with laboratory-confirmed Zika virus infection since the last update on 21 May.

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

**ECDC assessment**
Based on a growing body of research, there is scientific consensus that Zika virus is a cause of microcephaly and GBS. Several studies have documented steps in the chain of an intrauterine infection; from symptomatic Zika-like infection in a pregnant mother residing in a Zika-affected area, to detection of microcephaly with brain calcification in the foetus, and detection of Zika virus either in the amniotic fluid, in the cerebrospinal fluid of the newborn, or in the central nervous system of an aborted foetus or a dead newborn.

The magnitude of the risk that Zika virus infection during pregnancy will result in malformations in the foetus is under investigation, but remains unquantifiable at present.

Given the scientific consensus on the evidence of adverse pregnancy outcomes associated with Zika virus infection, ECDC recommends that pregnant women should consider to postpone non-essential travel to Zika-affected areas. In addition, in order to protect pregnant women, male travellers returning from affected areas should consider using a condom with a pregnant partner until the end of pregnancy. This precautionary advice is based on limited evidence and will be revised as more information becomes available.

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.
With the spread of the Zika virus, the likelihood of travel-related cases in the EU is increasing. As neither treatment nor vaccines are available, prevention is based on personal protection measures similar to those that are applied against dengue and chikungunya infections.

**Actions**

ECDC publishes an [epidemiological update](https://www.ecdc.europa.eu/en/publications-data/eu-eea-and-uk-notification-summary) every Friday and [maps](https://www.ecdc.europa.eu/en/publications-data/mosquito-monitoring) with information on countries or territories which have reported confirmed autochthonous cases of Zika virus infection.


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

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<th>Opening date:</th>
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**Epidemiological summary**

From 21 January to 1 June 2016, the Angolan Ministry of Health notified 2,893 suspected cases of yellow fever, of which 788 were confirmed, and 325 were fatal.

In the DRC as of 1 June, three probable cases and 52 laboratory confirmed cases have been reported: 44 of those are imported from Angola, and reported in Kongo Central, Kinshasa and Kwango (formerly Bandundu) provinces, two are sylvatic cases in Northern provinces, and two are autochthonous cases in Ndjjili (Kinshasa) and in Matadi (Kongo Central). The possibility of locally-acquired infection is under investigation for at least four non-classified cases.

In Uganda, as of 1 June, 68 suspected cases, of which three are probable and seven are laboratory confirmed, have been reported from three districts: Masaka, Rukungiri and Kalangala. According to sequencing results, those clusters are not epidemiologically linked to Angola. the outbreak strain indicates high similarities with the virus which caused the outbreak in Uganda in 2010.

A further three countries have reported suspected cases of yellow fever: Republic of Congo (one case), Sao Tome and Principe (two cases) and Ethiopia (22 cases). Investigations are ongoing to identify the vaccination status of the cases and determine if they are linked with Angola.

In Peru, up to the week to 8 May, there were 43 suspected cases of yellow fever reported in six departments, with four deaths. Of the reported cases, 14 were confirmed. Most cases are reported from Junin department. The number of confirmed and probable cases reported in Peru from the beginning of 2016, exceeds twice the total annual number of cases reported in the previous two years. This event is not related to the Angolan outbreak. The risk of geographical spread to the pacific coast is unlikely.

In Brazil, sporadic yellow fever cases have occurred in individuals without a history of yellow fever vaccination who were exposed to the virus circulating in historically endemic areas. In March 2016 one fatal case has been reported in Sao-Paulo state.

Despite extensive vaccination campaigns in several provinces of Angola, circulation of the virus persists mainly in urban areas and main ports. Cunene and Malanje provinces have reported, for the first time since the beginning of the outbreak, 5 autochthonous cases. From 21 January to 22 May 2016, the Angolan Ministry of Health notified 2,893 yellow fever cases, of which 325 were fatal.

Three countries have reported confirmed yellow fever cases imported from Angola: Democratic Republic of The Congo (44 cases), Kenya (two cases) and People's Republic of China (11 cases). This highlights the risk of international spread through non-immunised travellers.

**Web sources:** [ECDC factsheet](https://www.ecdc.europa.eu/en/publications-data/factsheet-yellow-fever) | [WHO yellow fever page](https://www.who.int/tdr/diseases/yellow_fever) | [WHO AFRO](https://www.afro.who.int) | [WHO SitRep 2 June 2016](https://www.who.int/tdr/sitrep/yellow_fever_20160602/en) | [WHO-DRC](https://www.afro.who.int) | [PAHO](https://www.paho.org) | [MoH Peru](https://www.minsa.gob.pe)

**ECDC assessment**

WHO estimates that 508 million people are living in 31 African countries at risk for transmission of yellow fever. Therefore, the large outbreak of yellow fever in Angola is of concern with regards to the risk of introduction of the virus through viraemic travellers to countries at risk of transmission, especially in neighbouring countries. Yellow fever in an urban setting is considered as a public health emergency that may result in a large number of cases. Vaccination is the single most important measure for...
preventing yellow fever. The outbreak in Angola is not yet controlled and is currently expanding to additional provinces challenging the ongoing mass vaccination campaign. The control of the outbreak in Angola is needed in order to prevent further spread in the region and beyond. Concerns exist that if yellow fever should spread to other countries in Africa and Asia there would be a need to further prioritise vaccine supplies, which would interrupt routine immunisation programmes in some countries.

In DRC, the confirmation of autochthonous circulation in the capital is a major concern as Kinshasa is highly populated, representing a risk of extension to Brazzaville, the capital of Republic of the Congo, that is located across the Congo river.

Proof of vaccination is required for all travellers aged 9 months and above entering Angola and DRC. WHO recommends vaccination for all travellers older than 9 months of age in areas where there is evidence of persistent or periodic yellow fever virus transmission. European citizens travelling to or residing in Angola should be vaccinated against yellow fever as per their national health authorities’ recommendations. Vaccine should be administered at least 10 days before travelling.

The competent vector for yellow fever, the *Aedes aegypti* mosquito, is not present in the continental EU but is present in the island of Madeira, an autonomous region of Portugal where the weather conditions are not currently suitable for mosquito activity.

**Actions**

ECDC published a rapid risk assessment on 25 March 2016 and and an epidemiological update on 1 April. An updated rapid risk assessment have been published on 27 May 2016.

**Ebola Virus Disease Epidemic - West Africa - 2014 - 2016**

**Epidemiological summary**

Between the end of February 2016 and 10 April, there have been seven confirmed and three probable cases of EVD in N’Zerekore, Guinea. Of these cases, eight have died. On 10 April, WHO reported three cases in Liberia linked to the Guinean cluster. Of these, one was fatal. Investigations suggest that the recent flare up in Guinea is linked to an EVD survivor and not to a new introduction from the animal population.

Official WHO figures as of 12 May 2016:

- **Guinea**: 3 804 cases including 2 536 deaths. The country was declared EVD-free on 29 December 2015. However, between the end of February and 10 April 2016, seven confirmed and three probable sporadic cases have been reported by WHO;

- **Liberia**: 10 666 cases, including 4 806 deaths. Liberia was declared EVD-free on 14 January 2016. However, between the end of March and 10 April 2016, three confirmed cases have been reported by WHO;

- **Sierra Leone**: 14 122 cases, including 3 955 deaths. The country was declared EVD-free on 7 November 2015. However, two epidemiologically linked sporadic cases were reported on 14 and 20 January 2016.

A 42-day period must elapse before the outbreaks can be declared over in Guinea and Liberia. In Guinea, this was on 31 May and in Liberia it will end on 9 June.

Seven countries have reported an initial case or localised transmission: Nigeria, Senegal, the USA, Spain, Mali, the UK and Italy.

**Web sources:** ECDC Ebola page | ECDC Ebola and Marburg fact sheet | WHO situation summary | WHO Roadmap | WHO Ebola Factsheet | CDC | Ebola response phase 3: Framework for achieving and sustaining a resilient zero | ReEBOV Antigen Rapid Test Kit | Institut Pasteur will open a lab in Conakry | Emergency Operation Centres in the three affected countries | Entry screening in US | media Liberia | WHO | media

**ECDC assessment**

The detection of new sporadic cases and small clusters of cases in Guinea and Liberia is not unexpected and highlights the importance of maintaining heightened surveillance and early detection of cases during the coming months as the risk of additional small outbreaks remains. Sporadic cases have been identified previously and are likely to be the result of the virus persisting in...
survivors even after recovery. Following the recent cases in Guinea and Liberia, WHO acknowledged that the 42-day (two incubation periods) countdown must elapse before the outbreak can be declared over in Guinea and Liberia. In Guinea, this was on 31 May and in Liberia, this will be on 9 June.

**Actions**

An [epi-update](#) was published on 23 March 2016.

On 16 October 2015, ECDC published the latest (13th) update of the [rapid risk assessment](#).

On 16 October 2015, ECDC published [Recent development on sexual transmission of Ebola virus](#).

On 31 July 2015, ECDC published [Positive preliminary results of an Ebola vaccine efficacy trial in Guinea](#).


On 4 December 2014, EFSA and ECDC published a [Scientific report assessing risk related to household pets in contact with Ebola cases in humans](#).

On 29 October 2014, ECDC published a [training tool on the safe use of PPE and options for preparing for gatherings in the EU](#).

On 23 October 2014, ECDC published [Public health management of persons having had contact with Ebola virus disease cases in the EU](#).

On 22 October 2014, ECDC published [Assessing and planning medical evacuation flights to Europe for patients with Ebola virus disease and people exposed to Ebola virus](#).

On 13 October 2014, ECDC published [Infection prevention and control measures for Ebola virus disease: Entry and exit screening measures](#).

On 6 October 2014, ECDC published [risk of transmission of Ebola virus via donated blood and other substances of human origin in the EU](#).

On 22 September 2014, ECDC published [assessment and planning for medical evacuation by air to the EU of patients with Ebola virus disease and people exposed to Ebola virus](#).

On 10 September 2014, ECDC published an [EU case definition](#).

**Dengue - Multistate (world) - Monitoring seasonal epidemics**

**Epidemiological summary**

**Europe**

No autochthonous dengue cases have been reported so far in 2016.

**French overseas department and region**

**Réunion Island** continues to report an increase in dengue cases with 23 new cases notified between 9 and 15 May. As of 18 May, 184 locally-acquired cases have been recorded, according to [media](#) quoting local health authorities.

**Asia**

In **Singapore**, 199 dengue cases were reported in the week ending 28 May, 13 cases fewer than in the previous week. As of 28 May, 8 097 dengue fever cases and five deaths have been recorded so far in 2016, according to the [National Environmental Agency](#) (NEA).

In **India**, Karnataka and Kerala states reported an increasing number of dengue cases during the past month. The latest report by the Directorate of National Vector Borne Disease Control Programme (NVBDCP) shows that 99 913 cases and 220 dengue-related deaths were reported in 2015. In Maharashtra state, the number of cases and deaths dropped by half (4 936 cases and 23
dengue fever. In South America, since the beginning of the year and as of epi week 21, Argentina recorded around 50 000 cases for the whole of 2015. Argentina is experiencing a substantial increase in cases so far this year compared with last year. As of epi week 19, 70 311 probable and 37 196 confirmed dengue cases have been notified. In the whole of 2015, Argentina recorded around 4 000 cases nationally.

**Pacific Region and Australia**
An outbreak of DENV-1 was declared in New Caledonia on 24 May 2016. There is currently active circulation of DENV-1 in French Polynesia and DENV-3 in Samoa and Solomon Islands. As of 16 May, there were decreasing or ongoing outbreaks of DENV-2 and DENV-3 in Papua New Guinea, according to the Pacific Public Health Surveillance Network. Fiji has recorded 332 cases of dengue fever since January this year, according to media quoting the Ministry of Health. In Australia, there are currently ongoing DENV-2 outbreaks in Charters Towers, Torres Strait, and a DENV-4 outbreak in Cairns, according to Queensland Health.

**Africa**
No data available.

**Web sources:** [ECDC Dengue](http://www.ecdc.europa.eu) | [Healthmap Dengue](http://www.healthmap.org) | [MedISys](http://www.medisyssystem.org) | [ProMed Asia and Pacific](http://www.promedmail.org)

**ECDC assessment**
Introduction and autochthonous transmission of dengue fever in Europe is possible where and when competent vectors are present. This underlines the importance of surveillance and vector control in European countries that have competent vectors.

**Actions**
ECDC has published a technical report on the climatic suitability for dengue transmission in continental Europe and guidance for the surveillance of invasive mosquitoes.

ECDC monitors the dengue situation worldwide on a monthly basis.

**Chikungunya- Multistate (world) - Monitoring global outbreaks**

**Epidemiological summary**

**Europe**
No autochthonous cases of chikungunya virus infection have been reported in EU Member States so far in 2016.

**Americas**
Since the beginning of the year and as of 27 May 2016, the Pan American Health Organization (PAHO) has reported 115 299 suspected and confirmed cases, including 15 fatalities, in the Americas and Caribbean region. This is an increase of 32 776 suspected and confirmed cases since the last update on 29 April. The most affected countries are Brazil (64,339), Colombia (14,877), and Argentina (10,972). The Czech Republic (1,564) and France (1,351) also had substantial numbers of notified cases. PAHO has also reported a 137% increase in the number of autochthonous cases of chikungunya reported by the Caribbean Public Health Agency (CARPHA).

As of 15 May, 111,405 suspected and confirmed cases of chikungunya have been reported in 11 European countries (Albania, Austria, Belgium, France, Germany, Greece, Italy, Malta, the Netherlands, Portugal, and Spain). This is an increase of 30,831 cases since the last update on 29 April. Since the beginning of the year, 111,414 cases have been reported in Europe, with 357 probable and 31 dengue related fatalities.
801), Honduras (8 315), Bolivia (6 898) and El Salvador (4 761).

In the USA, the Texas Department Health confirmed the first locally-acquired case of chikungunya. The date of onset of the case was November 2015 and was diagnosed with a laboratory test in January 2016. However, the case was not reported to the local health department until last month. The first locally-acquired chikungunya cases in the United States were confirmed in Florida in July 2014.

Pacific
On 9 May, an ongoing chikungunya outbreak was reported in Fiji, according to the Pacific Public Health Surveillance Network.

Africa
There is an ongoing chikungunya outbreak in Mandera County in Kenya’s North Eastern Region with 500 suspected and 10 confirmed cases. Several health staff are among those affected, according to MSF.

Web sources: PAHO update | ECDC Chikungunya | WHO Factsheet | Medisys page |

ECDC assessment
Outbreaks are still ongoing in the Caribbean, Americas and Pacific but at a lower level compared with the same period last year, especially in the Pacific region. Continued vigilance is needed to detect imported cases of chikungunya in tourists returning to the EU from these regions.

Europe is vulnerable to the autochthonous transmission of chikungunya virus. The risk for onward transmission in Europe is linked to importation of the virus by viraemic patients in areas with competent vectors (Aedes albopictus in mainland Europe, primarily around the Mediterranean, and Aedes aegypti on Madeira). Autochthonous transmission from an imported viraemic chikungunya case is possible during the summer season in the EU.

Actions
ECDC published an epidemiological update on 16 September regarding the false positive case of chikungunya in Valencia province, Spain. Despite the fact that autochthonous transmission has not been confirmed in Spain, the conclusions of ECDC’s rapid risk assessment published on 24 August remain valid.

ECDC monitors the global chikungunya situation on a monthly basis.

Poliomyelitis - Multistate (world) - Monitoring global outbreaks
Opening date: 8 September 2005 Latest update: 3 June 2016

Epidemiological summary
In 2016, sixteen cases of wild poliovirus type 1 (WPV1) have been reported, compared with 74 cases for the same period in 2015. The cases were detected in Pakistan (11 cases) and in Afghanistan (five cases).

As of 3 June 2016, three cases of circulating vaccine-derived poliovirus (cVDPV) have been reported to WHO in 2016, all from Laos. There were 32 cVDPV cases during the same period in 2015.


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 re-introduced into 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.