

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

Influenza - Multistate (Europe) - Monitoring 2015-2016 season

Opening date: 2 October 2015

Latest update: 20 May 2016

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

→ Update of the week

In week 19/2016, influenza activity continued to decrease in the WHO European Region. Most countries (95%) reported low intensity. The percentage of positive specimens and the absolute number of influenza virus detections decreased compared to the previous week. Type B viruses accounted for 95% of influenza detections in specimens from sentinel sources and 72% from non-sentinel sources. Few cases of severe disease were reported from intensive care units. Most severe cases were associated with A(H1N1)pdm09 infection and were in people aged 15–64 years.

Non EU Threats

Public health risks - Multistate - Refugee movements

Opening date: 4 November 2015

Latest update: 20 May 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.

→ Update of the week

No new events of epidemiological relevance have been reported during the past week. According to [media](#), the number of migrants and refugees returning to Turkey from Greece as part of a recent deal between the EU and Turkey has fallen short of the EU's expectations. Less than 400 of the 8 500 people who arrived on the Greek islands since the EU-Turkey deal was signed have been returned to Turkey.

Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015

Latest update: 20 May 2016

As of 19 May 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.

→Update of the week

Since last week, **Puerto Rican** [local health authorities](#) have reported the first possible case of microcephaly associated with locally-acquired Zika infection.

Outbreak of yellow fever - Multistate (world) - Monitoring global outbreaks

Opening date: 17 March 2016

Latest update: 20 May 2016

An outbreak of yellow fever in Angola started in December 2015 in the municipality of Viana, Luanda province and spread to all the 18 provinces of Angola. A mass immunisation campaign is taking place. The neighbouring Democratic Republic of Congo (DRC) reports imported cases of yellow fever and on 2 May the first confirmed autochthonous transmission in Kinshasa, the capital. On 5 May, DRC reported an additional autochthonous case in Kongo Central. An outbreak of yellow fever not linked to the outbreak in Angola has been reported in several districts in Uganda.

→Update of the week

WHO

An Emergency Committee (EC) regarding yellow fever was convened by the Director-General under the International Health Regulations (2005) (IHR 2005) by teleconference on 19 May 2016. The Committee decided that based on the information provided the event does not at this time constitute a Public Health Emergency of International Concern (PHEIC). While not considering the event currently to constitute a PHEIC, Members of the Committee strongly emphasised the serious national and international risks posed by urban yellow fever outbreaks and offered technical advice on immediate actions for the consideration of WHO and Member States in the following areas:

- the acceleration of surveillance, mass vaccination, risk communications, community mobilisation, vector control and case management measures in Angola and the Democratic Republic of Congo;
- the assurance of yellow fever vaccination of all travellers, and especially migrant workers, to and from Angola and Democratic Republic of Congo;
- the intensification of surveillance and preparedness activities, including verification of yellow fever vaccination in travellers and risk communications, in at-risk countries and countries having land borders with the affected countries.

The Committee also emphasised the need to manage rapidly any new yellow fever importations, thoroughly evaluate ongoing response activities, and quickly expand yellow fever diagnostic and confirmatory capacity. Recognising the limited international supply of yellow fever vaccines, the Committee also advised the immediate application of the policy of 1 lifetime dose of yellow fever vaccine and the rapid evaluation of yellow fever vaccine dose-sparing strategies by the WHO Strategic Advisory Group of Experts on Immunisation (SAGE).

Vaccination campaigns

As of 16 May 2016, the International Coordinating Group (ICG) on vaccine provision for yellow fever has provided approximately 15 million vaccine doses: 11.7 million for Angola, 2.2 million for DRC and 0.76 million for Uganda. The vaccination campaign started in Angola in February 2016 and is ongoing. In Uganda, the vaccination campaign will start on 20 May in Masaka, Rukungiri and Kalangala. DRC plans to start vaccinations on 26 May in selected districts in Kinshasa/Matadi.

Ebola Virus Disease Epidemic - West Africa - 2014 - 2016

Opening date: 22 March 2014

Latest update: 20 May 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. Follow-up of contacts related to the recent cases in Guinea and Liberia has been completed.

Middle East respiratory syndrome – coronavirus (MERS CoV) – Multistate

Opening date: 24 September 2012

Latest update: 20 May 2016

Since April 2012 and as of 18 May 2016, 2016, 1 751 cases of MERS, including 680 deaths, have been reported by health authorities worldwide. The source of the virus remains unknown, but the pattern of transmission and virological studies point towards dromedary camels in the Middle East as being a reservoir from which humans sporadically become infected through zoonotic transmission. Human-to-human transmission is amplified among household contacts and in healthcare settings.

→Update of the week

Since the last update on 14 April 2016, ten additional MERS-CoV cases have been detected in the Middle East. Nine of the cases occurred in Saudi Arabia and one was reported from Qatar. Prior to this case, the last case reported from Qatar occurred in February 2016. Of the ten cases, nine were male, two were classified as asymptomatic and one died. Five of the ten cases reported camel contact and two cases reported drinking raw camel milk. According to WHO Regional Office for the Eastern Mediterranean (WHO EMRO), no new clusters or hospital outbreaks of MERS were reported in April 2016. The hospital outbreak that was reported during the months of February and March in Buraidah city in the Al-Qassim region is reported to be over.

Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013

Latest update: 20 May 2016

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, and up to 17 May 2016, 781 cases have been reported to WHO, including at least 303 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

During the past month, 29 additional human cases of influenza A(H7N9) including 9 deaths, have been reported by China. Twenty-six of the cases (90%) reported exposure to live poultry, slaughtered poultry, or live poultry markets. One case has a history of selling pork in a market. The exposure history of one case is unknown, and one case is linked to a cluster of two previously reported cases. The dates of onset for the 29 cases ranged from 21 February to 21 April 2016. Of the 29 cases, 65% (19) were male. Cases were reported from the following provinces: Jiangsu (10), Jiangxi (2), Anhui (5), Shandong (1), Zhejiang (3) Fujian (3), Guangdong (3), Hubei (1) and Hong Kong (1).

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005

Latest update: 20 May 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) 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. WHO recently declared wild poliovirus type 2 eradicated worldwide.

→Update of the week

During the past week, WHO reported one new wild poliovirus type 1 (WPV1) case in Pakistan. There were no official circulating vaccine-derived poliovirus (cVDPV) cases reported.

II. Detailed reports

Influenza - Multistate (Europe) - Monitoring 2015-2016 season

Opening date: 2 October 2015

Latest update: 20 May 2016

Epidemiological summary

This season, influenza A(H1N1)pdm09 viruses have predominated in most countries in the Region. As is often seen late in the northern hemisphere's influenza season, a shift towards circulation of type B influenza virus has occurred with type B dominating since week 09/2016 in specimens from sentinel sources. Influenza activity, based on laboratory-confirmed mild and severe cases in sentinel and non-sentinel sources, peaked in weeks 05–07/2016. The countries first affected were in general located in the eastern part of the Region. Data from the 18 countries or regions reporting to the European monitoring of excess mortality for public health action (EuroMOMO) project suggested a pattern of excess all-cause mortality among those aged 15–64 years between the end of 2015 and week 14/2016. This may have been associated with influenza, as well as other factors. The level of excess all-cause mortality was similar to that of the 2012–2013 winter season and slightly lower than that of the 2014–2015 winter season. Most of the viruses genetically characterised so far have been similar to those recommended for inclusion in the trivalent or quadrivalent vaccines for the 2015–2016 influenza season in the northern hemisphere.

ECDC assessment

Most of the viruses genetically characterised so far have been similar to those recommended for inclusion in the trivalent or quadrivalent vaccines for the 2015–2016 influenza season in the northern hemisphere. The vast majority of the viruses genetically and/or phenotypically characterised so far show no indications of reduced susceptibility to the neuraminidase inhibitors oseltamivir and zanamivir. Recommendations on the composition of the seasonal influenza vaccines for the 2016–2017 season in the northern hemisphere call for replacement of the A(H3N2) component with a more recent virus and inclusion of a B/Victoria-lineage virus in trivalent vaccines.

Actions

ECDC monitors influenza activity in Europe during the winter season and publishes its report weekly 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.

Public health risks - Multistate - Refugee movements

Opening date: 4 November 2015

Latest update: 20 May 2016

Epidemiological summary

There have been reports of emerging episodes of communicable diseases affecting 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. The risk that refugees arriving in Europe will contract communicable diseases has increased because of the current overcrowding at reception facilities. The risk of infectious diseases varies with the seasons, particularly for respiratory, gastrointestinal and mosquito-borne diseases. The risk of infectious diseases in refugees increases with overcrowding and lack of access to water and sanitation. Low vaccination coverage for some diseases, along with low immunity for others, may result in susceptible refugees developing diseases such as measles and chicken pox, given their high incidence in some regions of the EU.

[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.

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The risk to European residents of being affected by outbreaks occurring among refugee populations remains extremely low because overcrowding, limited access to clean water and poor hygiene levels are mostly encountered in certain reception facilities for refugees.

Actions

Following the request of the Greek authorities an ECDC senior expert has been in the field to review the risk assessment for communicable diseases on the basis of the current situation, supported the revision of the protocol for Point of Care public health surveillance for refugees, and advised on response procedures and priority settings. Two EPIET fellows were deployed to Greece on 13 April 2016 for one month 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

Opening date: 16 November 2015

Latest update: 20 May 2016

Epidemiological summary

Brazil

Since October 2015 and as of 14 May 2016, Brazil has reported 7 534 suspected cases of microcephaly from all states and in the Federal District. Of these cases, 1 384 are reported as confirmed cases of microcephaly, 207 of which had laboratory-confirmed presence of Zika virus infection. This is an increase of 96 suspected cases of microcephaly, and two confirmed microcephaly cases with laboratory confirmation of Zika virus infection since the last update on 7 May. Of the remaining cases, 2 818 were investigated and discarded as they did not fit the case definition, while 3 332 cases are under investigation.

Among the 7 438 suspected cases of microcephaly, 273 intrauterine or neonatal deaths were reported. Of these, 59 cases were investigated and confirmed (microcephaly or central nervous system malformations).

Colombia

Between epidemiological weeks 1 and 18 in 2016, Colombia has reported five confirmed cases of microcephaly associated with Zika virus infection, 24 cases were discarded and 43 cases were still under investigation.

Congenital zika syndrome and GBS

As of 19 May 2016, microcephaly and other foetal malformations potentially associated with Zika virus infection or suggestive of congenital infection have been reported in eight countries (Brazil, Cape Verde, Colombia, French Polynesia, Martinique, Marshall Islands, Panama and Puerto Rico). Two additional cases, each linked to a stay in Brazil, were detected in Slovenia and the United States of America. One more case was reported in a returning traveller from the affected countries in the United States of America. One additional case was detected in Spain in a returning traveller.

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.

Imported cases to Europe

As of 19 May 2016, ECDC has recorded 607 imported cases in 18 EU/EEA countries. Thirty-four 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 systems hence cannot be considered exhaustive.

As of 19 May 2016, twenty-three cases of non-vector-borne transmission of Zika virus, probably through sexual transmission have been reported by nine countries: Argentina (1), Chile (1), France (5), Italy (1), New Zealand (1), Portugal (in the Autonomous Region of Madeira) (1), Peru (1), Canada (1), the United States of America (10) and Germany (1).

EU's Outermost Regions and Territories

Martinique: As of 19 May 2016, 25 610 suspected cases have been reported, an increase of 1 770 since last week. Since the beginning of the outbreak to 19 May 2016, two microcephaly cases and one additional congenital abnormality have been reported with confirmed Zika virus infection. In addition, 20 cases with GBS have been detected. Among these, 19 have been confirmed with Zika virus infection.

French Guiana: As of 19 May 2016, 6 245 suspected cases have been reported, an increase of 485 since last week. Three cases with neurological complications have been identified since the beginning of the outbreak.

Guadeloupe: As of 19 May 2016, 5 025 suspected cases have been reported, an increase of 1 140 suspected cases since last week. One case with neurological complications has been reported since the beginning of the outbreak.

St Martin: As of 19 May 2016, 330 suspected cases have been reported, an increase of 65 suspected cases since last week. One case with neurological complications has been reported. However, an association with Zika virus infection has not been established.

St Barthélemy: As of 19 May 2016, ten suspected and one laboratory confirmed case have been reported.

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 calcifications 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

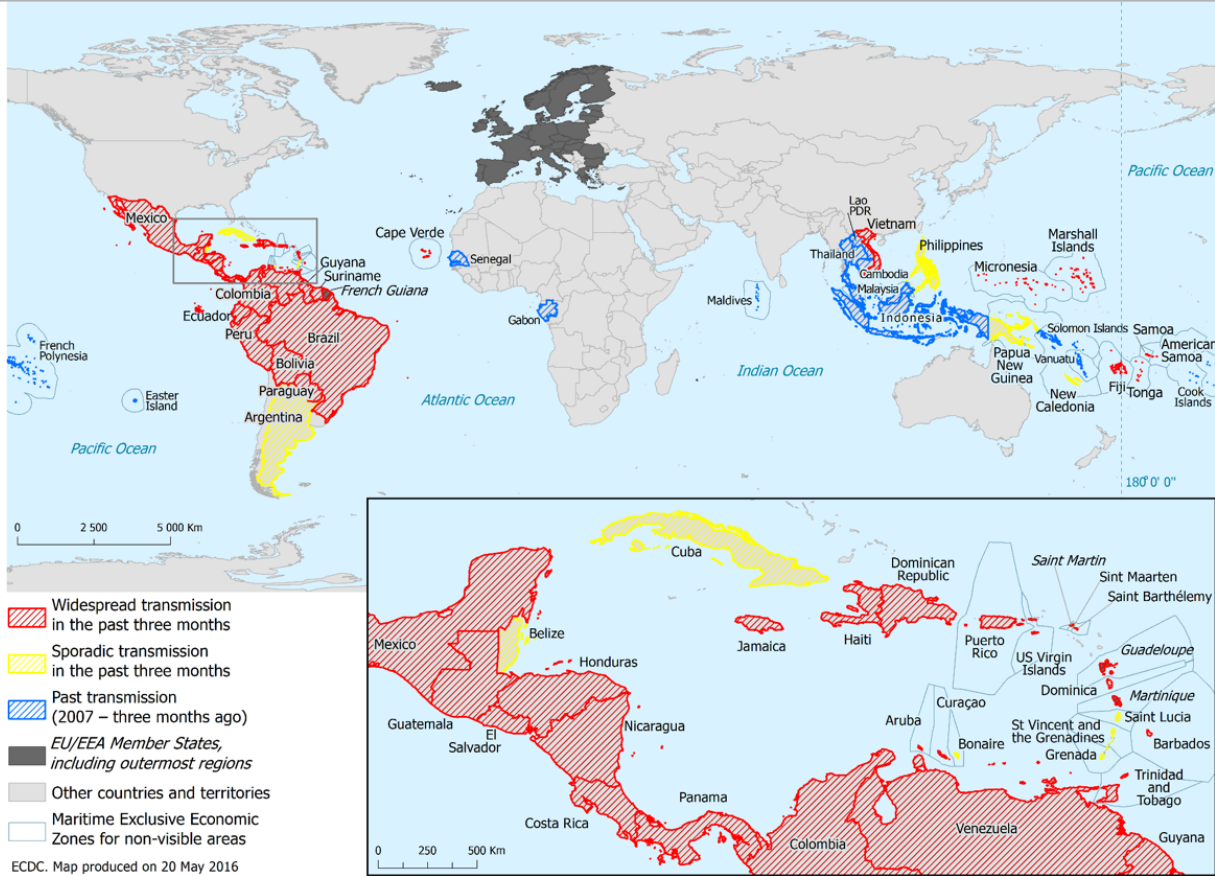
ECDC publishes an [epidemiological update](#) every Friday and [maps](#) with information on countries or territories which have reported confirmed autochthonous cases of Zika virus infection.

ECDC published an update of the [rapid risk assessment](#) on 11 April 2016 and has updated the [ECDC Zika page](#) with [Frequently Asked Questions](#).

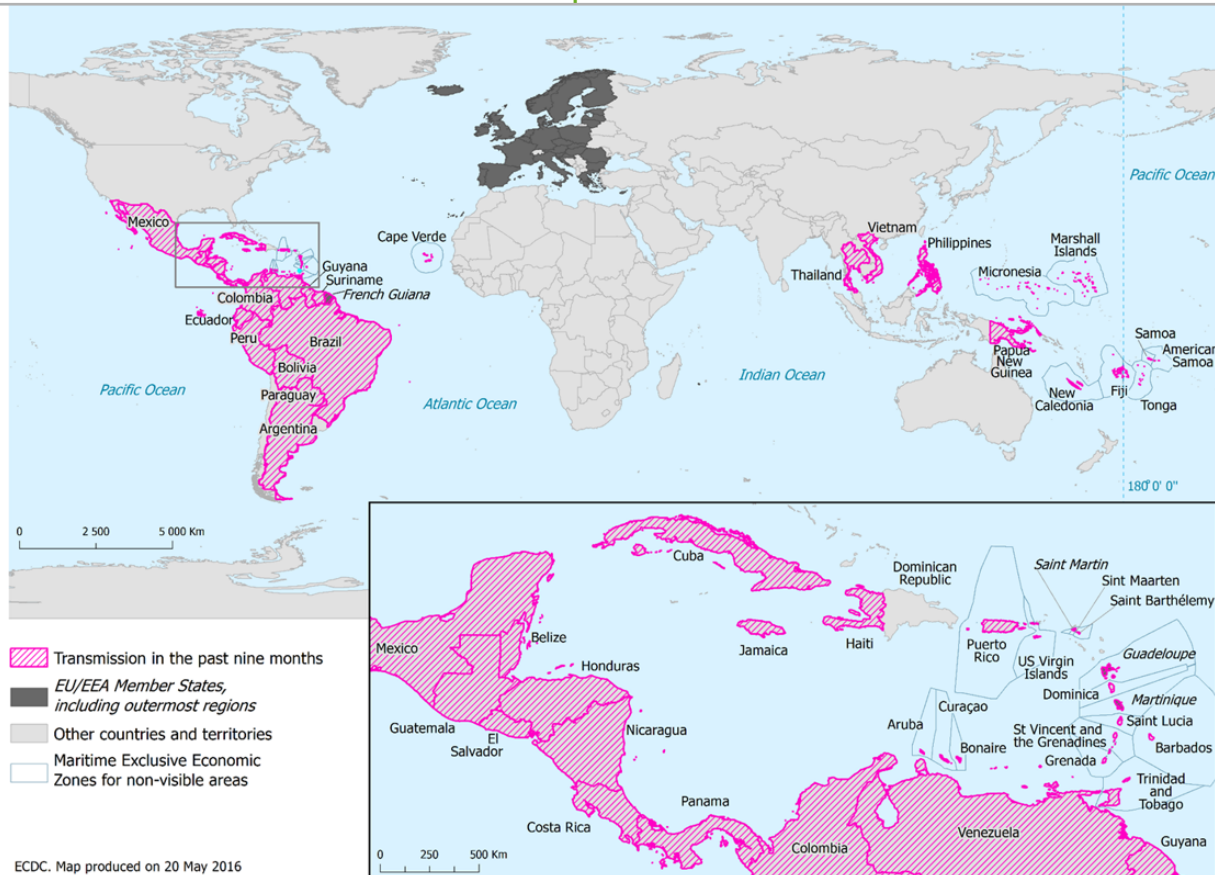
Countries or territories with reported confirmed autochthonous cases of Zika virus infection in the past nine months, as of 20 May 2016

	Current Zika transmission	Zika transmission in the past nine months
American Samoa	Increasing or widespread	Yes
Argentina	Sporadic transmission	Yes
Aruba	Increasing or widespread	Yes
Barbados	Increasing or widespread	Yes
Belize	Sporadic transmission	Yes
Bolivia	Increasing or widespread	Yes
Bonaire	Sporadic transmission	Yes
Brazil	Increasing or widespread	Yes
Cape Verde	Increasing or widespread	Yes
Colombia	Increasing or widespread	Yes
Costa Rica	Increasing or widespread	Yes
Cuba	Sporadic transmission	Yes
Curaçao	Increasing or widespread	Yes
Dominica	Increasing or widespread	Yes
Dominican Republic	Increasing or widespread	Yes
Ecuador	Increasing or widespread	Yes
El Salvador	Increasing or widespread	Yes
Fiji	Increasing or widespread	Yes
French Guiana	Increasing or widespread	Yes
Grenada	Sporadic transmission	Yes
Guadeloupe	Increasing or widespread	Yes
Guatemala	Increasing or widespread	Yes
Guyana	Increasing or widespread	Yes
Haiti	Increasing or widespread	Yes
Honduras	Increasing or widespread	Yes
Jamaica	Increasing or widespread	Yes
Marshall Islands	Increasing or widespread	Yes
Martinique	Increasing or widespread	Yes
Mexico	Increasing or widespread	Yes
Micronesia, Federated States of	Increasing or widespread	Yes
New Caledonia	Sporadic transmission	Yes
Nicaragua	Increasing or widespread	Yes
Panama	Increasing or widespread	Yes
Papua New Guinea	Sporadic transmission	Yes
Paraguay	Increasing or widespread	Yes
Peru	Increasing or widespread	Yes
Philippines	Sporadic transmission	Yes
Puerto Rico	Increasing or widespread	Yes
Saint Lucia	Sporadic transmission	Yes
Saint Martin	Increasing or widespread	Yes
Saint Vincent and the Grenadines	Sporadic transmission	Yes
Saint-Barthélemy	Increasing or widespread	Yes
Samoa	Increasing or widespread	Yes
Sint Maarten	Sporadic transmission	Yes
Suriname	Increasing or widespread	Yes
Thailand	No	Yes
Tonga	Increasing or widespread	Yes
Trinidad and Tobago	Increasing or widespread	Yes
US Virgin Islands	Increasing or widespread	Yes
Venezuela	Increasing or widespread	Yes
Vietnam	Increasing or widespread	Yes

Countries and territories with reported confirmed autochthonous vector-borne transmission of Zika virus infection in the past three months*, as of 20 May 2016



Countries and territories with reported confirmed autochthonous vector-borne transmission of Zika virus infection in the past 9 months



Outbreak of yellow fever - Multistate (world) - Monitoring global outbreaks

Opening date: 17 March 2016

Latest update: 20 May 2016

Epidemiological summary

Angola

As of 15 May 2016, the Angolan Ministry of Health has reported 2 420 cases and 298 deaths. This is an increase of 153 cases in the past week. Of these cases, 736 cases are confirmed. Of the confirmed cases, 459 are from Luanda and 277 are from outside of Luanda. Cases have been reported from all 18 provinces.

Democratic Republic of Congo (DRC)

As of 19 May 2016, 49 cases have been reported in four provinces: Bas Uélé, Tshuapa, Kongo Central and Kinshasa. Of these 44, were confirmed by Pasteur Institute in Dakar (IgM, PCR or seroneutralisation). The majority of the cases, 42 are imported from Angola, two are autochthonous and five under investigation. In addition, since the beginning of the outbreak until 11 May, 551 suspected cases, including 55 deaths were reported.

Uganda

9/17

On 19 May 2016, WHO issued an update on the yellow fever outbreak in Uganda, which is unrelated to the outbreak in Angola. As of 19 May, Uganda reported 60 cases of which 7 are laboratory confirmed. The cases are reported in the districts of Masaka, Rukungiri and Kalangala. None of the cases has recent travel history to Angola. As of 24 April, no new cases of yellow fever were reported from Masaka and Rukungiri districts and all previously admitted cases were discharged from the treatment centres.

Web sources: [ECDC factsheet](#) / [WHO yellow fever page](#) | [WHO AFRO](#) | [WHO SitRep 12 May 2016](#) | [WHO-DRC](#) |

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 an [epidemiological update](#) on 1 April. Experts from three EU Member States (Germany, Portugal and Belgium), the European Commission and the European Centre for Disease Prevention and Control have been deployed to Angola as a public health team under the European Medical Corps.

Ebola Virus Disease Epidemic - West Africa - 2014 - 2016

Opening date: 22 March 2014

Latest update: 20 May 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 is due to end 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 is due to end on 31 May and in Liberia, this is due to end 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 22 January 2015, ECDC published [Infection prevention and control measures for Ebola virus disease. Management of healthcare workers returning from Ebola-affected areas](#).

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](#).

Middle East respiratory syndrome – coronavirus (MERS CoV) – Multistate

Opening date: 24 September 2012

Latest update: 20 May 2016

Epidemiological summary

As of 18 May 2016, 1 751 cases of MERS, including 680 deaths, have been reported by health authorities worldwide.

Web sources: [ECDC's latest rapid risk assessment](#) | [ECDC novel coronavirus webpage](#) | [WHO](#) | [WHO MERS updates](#) | [WHO](#)

[travel health update](#) | [WHO Euro MERS updates](#) | [CDC MERS](#) | [Saudi Arabia MoH](#) | [Saudi Arabia statement](#) | [ECDC factsheet for professionals](#)

ECDC assessment

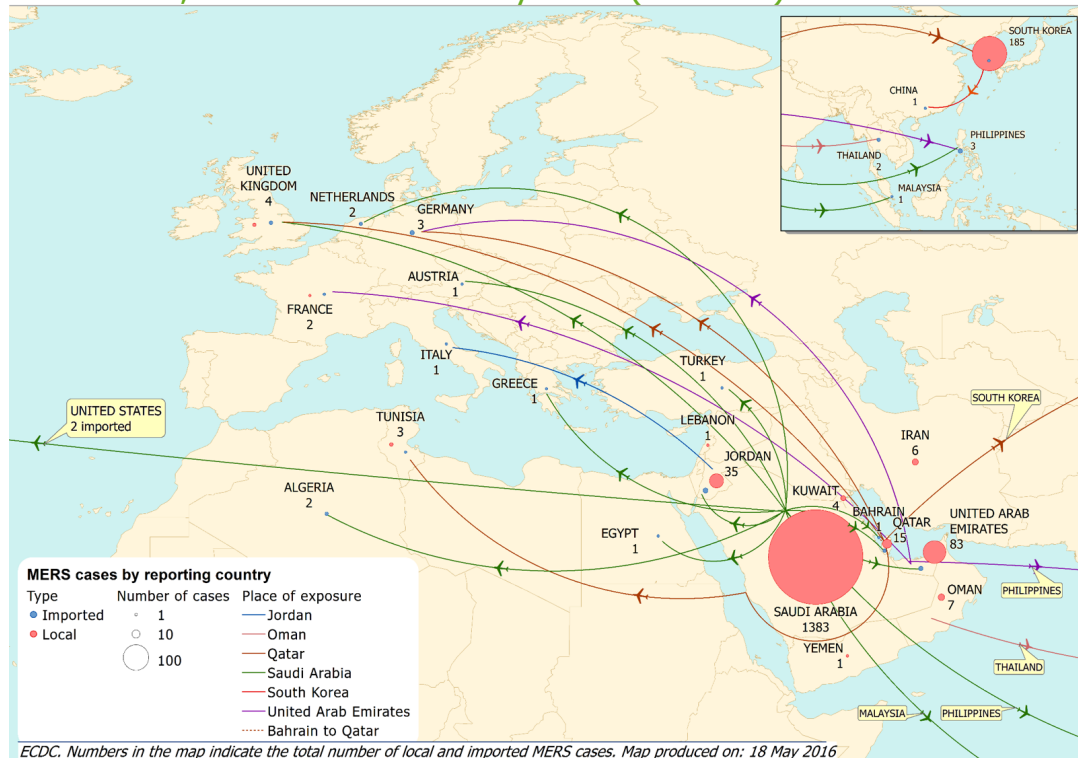
The MERS outbreak in the Middle East poses a low risk to the EU. Efforts to contain the nosocomial clusters in the affected countries are vital to prevent wider transmission. Although it is likely that zoonotic transmission is the starting point of most clusters, human-to-human transmission is the most common mode of transmission for MERS-CoV. Human-to-human transmission occurs mostly in healthcare settings and, to a much more limited extent, within communities, mainly within households. So far, the majority of cases have been reported from hospital outbreaks in Saudi Arabia, the United Arab Emirates and South Korea.

Most nosocomial transmissions occur when infection prevention and control precautions are suboptimally applied and before a specific case is suspected or confirmed. The successful prevention of amplification of MERS-CoV infections associated with healthcare facilities depends on the effective implementation of infection prevention and control programmes.

Actions

ECDC published the 21st update of its MERS CoV [rapid risk assessment](#) on 21 October 2015.

Distribution of confirmed cases of MERS-CoV by first available date, and probable place of infection, March 2012 – 18 May 2016 (n=1 751)

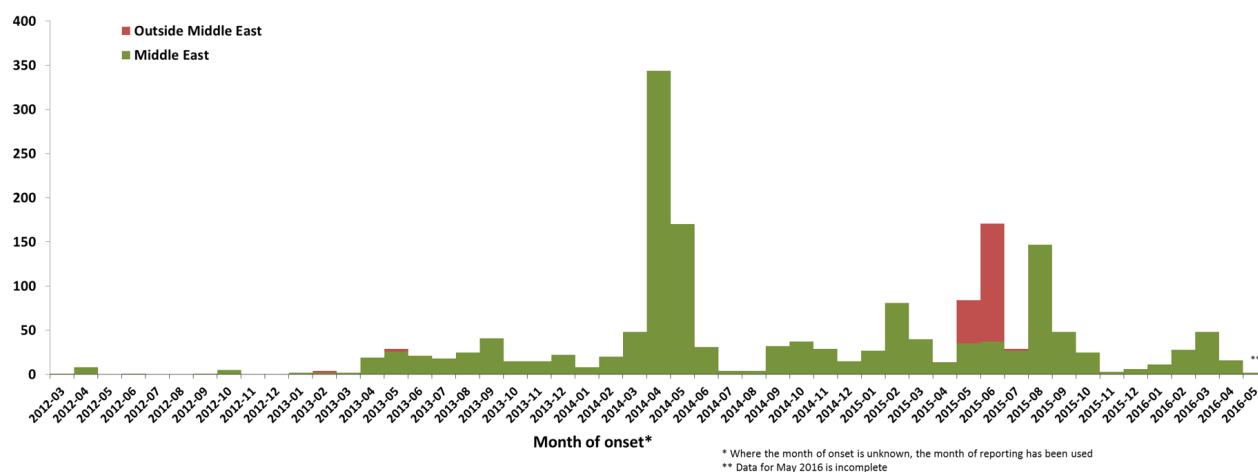


Distribution of confirmed cases of MERS-CoV by country of reporting, March 2012 – 18 May 2016 (n=1 751)

Region	Country	Number of cases	Number of deaths
Middle East	Saudi Arabia	1383	592
	United Arab Emirates	83	12
	Qatar	15	5
	Jordan	35	14
	Oman	7	3
	Kuwait	4	2
	Egypt	1	0
	Yemen	1	1
	Lebanon	1	0
	Bahrain	1	0
Iran	6	2	
Europe	Turkey	1	1
	UK	4	3
	Germany	3	2
	France	2	1
	Italy	1	0
	Greece	1	1
	Netherlands	2	0
	Austria	1	0
Africa	Tunisia	3	1
	Algeria	2	1
Asia	Malaysia	1	1
	Philippines	3	0
	South Korea	185	38
	China	1	0
	Thailand	2	0
Americas	United States of America	2	0
Global		1751	680

Distribution of confirmed cases of MERS-CoV by region of reporting, March 2012 – 18 May 2016 (n=1 751)

Number of cases



Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013

Latest update: 20 May 2016

Epidemiological summary

The human cases of influenza A(H7N9) reported by China since March 2013 have the following geographical distribution: Zhejiang (218), Guangdong (194), Jiangsu (101), Fujian (72), Shanghai (51), Anhui (37), Hunan (34), Hong Kong (16), Jiangxi (12), Xinjiang Uyghur (10), Shandong (8), Beijing (6), Taiwan (4), Henan (4), Guangxi (4), Guizhou (2), Hubei (2), Jilin (2) and Hebei (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 areas that are already affected and in neighbouring areas.

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 22/2016)



Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005

Latest update: 20 May 2016

Epidemiological summary

In 2016, fifteen cases of wild poliovirus type 1 (WPV1) have been reported, compared with 24 cases for the same period in 2015. The cases were detected in Pakistan (10 cases) and in Afghanistan (five cases).

As of 19 May 2016, three cases of circulating vaccine-derived poliovirus (cVDPV) have been reported to WHO in 2016, all from Laos. There was one cVDPV case 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

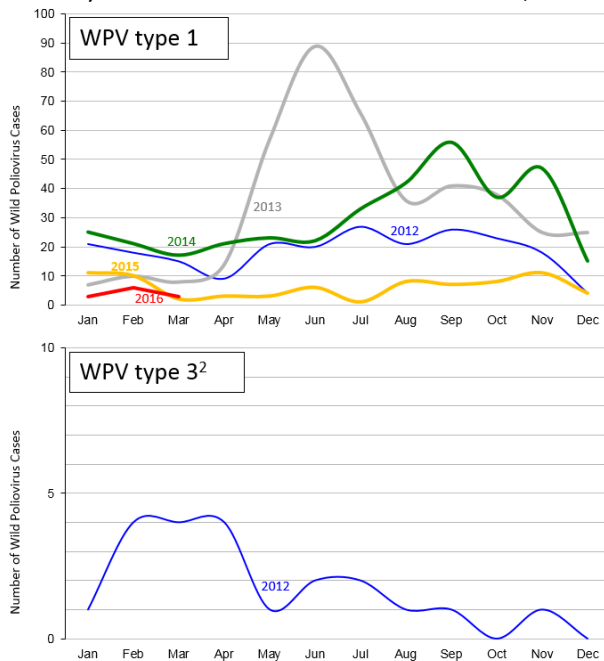
ECDC monitors reports of polio cases worldwide through epidemic intelligence in order to highlight polio eradication efforts and identify events that increase the risk of wild poliovirus being re-introduced into the EU. Following the declaration of polio as a PHEIC, ECDC updated its [risk assessment](#). 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](#).

Monthly Distribution of Wild Poliovirus Cases, 2012-2016 by onset of paralysis

Global Polio Eradication Initiative WHO

Monthly Distribution of Wild Poliovirus Cases¹, 2012-2016



Data in WHO/HQ as of 10 May 2016

¹By date of onset of paralysis. WPV type 1 includes 1 case in 2012 with a mixture of W1W3 virus. Cases with onset in February 2016 will be reflected in the next update.
²No WPV3 cases were reported in 2013 - 2016.

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