

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: 4 December 2015

Following the 2009 pandemic, influenza transmission in Europe has returned to its seasonal epidemic 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 48, the intensity of influenza activity across the WHO European Region was at low levels in most of the 40 countries that reported data.

Rubella - Multistate (EU) - Monitoring European outbreaks

Opening date: 7 March 2012

Latest update: 3 December 2015

Rubella, caused by the rubella virus and commonly known as German measles, is usually a mild and self-limiting disease which often passes unnoticed. The main reason for immunising against rubella is the high risk of congenital malformations associated with rubella infection during pregnancy. All EU Member States recommend vaccination against rubella with at least two doses of vaccine for both boys and girls. The vaccine is given at the same intervals as the measles vaccine as part of the MMR vaccine. Very few outbreaks of rubella have been reported in the EU so far this year.

→Update of the week

No new outbreaks have been detected in EU Member States since the last monthly update.

Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011

Latest update: 3 December 2015

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. Elimination of measles requires consistent vaccination uptake above 95% with two doses of measles vaccine in all population groups, strong surveillance and effective outbreak control measures. In 2014, 16 EU/EEA countries were above the measles vaccination coverage target of 95% for the first dose and six countries were above this target for the second dose. Fourteen countries have coverage rates of <95% for the first dose and 20 countries for the second dose.

→Update of the week

No new outbreaks were detected in the EU during the last two months.

In the rest of the world, measles outbreaks are ongoing in several countries in Asia and Africa.

Non EU Threats

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005

Latest update: 3 December 2015

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 25 November 2015, the Temporary Recommendations in relation to PHEIC were extended for another three months. WHO recently declared wild poliovirus type 2 eradicated worldwide.

→Update of the week

During the last week, new cases of wild poliovirus type 1 (WPV1) were reported from Afghanistan (one case) and from Pakistan (two cases). One new WPV1 positive environmental sample was reported from Afghanistan and three from Pakistan. One new case of circulating vaccine-derived poliovirus type 1 (cVDPV1) was reported in Lao People's Democratic Republic.

A two-year-old child from Delhi, India, suffering from immunodeficiency was diagnosed with a rare vaccine-derived polio virus type 2 (VDPV2) in the first week of November. An immunisation round in children under five-year of age was conducted in the area.

The Organisation of Islamic Cooperation (OIC) urged all countries affected by polio to implement their National Emergency Plans. Commonwealth leaders united in Malta reaffirmed their commitment to ending polio.

Public health risks - Multistate - Refugee movements

Opening date: 4 November 2015

Latest update: 3 December 2015

Europe is experiencing its largest influx of refugees since the Second World War. According to the UN Refugee Agency (UNHCR), more than 894 000 refugees have arrived in Europe in 2015. To date, there have been reports of cases of louse-borne relapsing fever, cutaneous diphtheria, scabies, measles, shigellosis, tuberculosis and malaria among refugees. While these cases do not represent a significant disease burden for the host countries, the diseases do pose a potential threat, particularly to the health of the refugees themselves. The health conditions of the refugees may worsen with the wintery weather due to low temperatures and overcrowding in shelters.

→Update of the week

According to media or public health authorities sites, vaccination campaigns among refugees in several countries in Europe (Germany, Sweden and Norway) have been initiated or are being recommended.

ECDC published a rapid risk assessment on shigellosis among refugees in the EU.

In a statement on 25 November, WHO acknowledges that large population movements across the Middle East and from Afghanistan and Pakistan create a heightened risk of international spread of polio.

Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013

Latest update: 3 December 2015

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then, 681 cases have been reported up until 3 December 2015, including 275 deaths. No autochthonous cases have been reported outside China. Most cases have been unlinked, and sporadic zoonotic transmission from poultry to humans is the most likely explanation for the outbreak.

→Update of the week

During the past week no new cases of A(H7N9) have been detected in humans.

Influenza A(H5N1) and other strains of avian flu - Multistate (world) - Monitoring globally

Opening date: 15 June 2005

Latest update: 3 December 2015

The influenza A(H5N1) virus, commonly known as bird flu, is fatal in about 60% of human infections. Sporadic cases continue to be reported, usually after contact with sick or dead poultry from certain Asian and African countries. No human cases have been reported from Europe. From 2003 through 3 December 2015, 844 laboratory-confirmed human cases of avian influenza A (H5N1) virus infection have been officially reported to WHO from 16 countries. Of these cases, 449 have died.

→Update of the week

No new human cases of A(H5N1) have been reported since 17 July 2015.

In November 2015, the French authorities notified about an outbreak of highly pathogenic avian influenza of subtype H5, A (H5N1) and A(H5N2) in holdings where poultry or other captive birds are kept.

On 30 November 2015 [Italy](#) reported an outbreak of low pathogenic A(H5N2) in a Turkey farm in Emilia Romagna. Necessary measures have been taken by the local authorities.

Background: The last A(H5N1) case detected in France was in wild swans in 2007.

In Europe, in 2015, Bulgaria has detected cases in backyard poultry in Burgas region. Bulgaria and Romania detected cases in wild pelicans by a natural park. All were highly pathogenic.

From 2003 through 26 November 2015, 844 laboratory-confirmed human cases of avian influenza A(H5N1) virus infection have been officially reported to WHO from 16 countries, with no European countries reporting a case. Of these cases, 449 died. Various influenza A(H5) subtypes, such as influenza A(H5N1), A(H5N2) and A(H5N6), continue to be detected in birds in Africa and Asia, according to recent reports received by the World Organization for Animal Health (OIE).

Emergence of plasmid-mediated colistin resistance mechanism MCR-1 in *E. coli* - China

Opening date: 20 November 2015

Latest update: 3 December 2015

The first detection of plasmid-mediated resistance to polymyxins (MCR-1) in China was reported in an article published in *Lancet Infectious Diseases* on 18 November 2015.

→Update of the week

On 3 December, 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. This is the first time plasmid-mediated resistance to polymyxins (MCR-1) in *E. coli* has been detected in humans and food in Europe.

Dengue - Multistate (world) - Monitoring seasonal epidemics

Opening date: 20 April 2006

Latest update: 3 December 2015

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. On 12 November 2015, WHO announced an outbreak of dengue fever in Assuit Governorate in Egypt. Between 1 and 31 October 2015, 253 cases were hospitalised due to acute febrile illness. Twenty-eight out of 118 serum samples were positive for DENV-1.

→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 December 2015

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 Pacific region. In 2015, there remained ongoing outbreaks in these regions but at a lower level compared with the same period last year, especially in the Pacific region. 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, Americas, and the Pacific.

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

Opening date: 24 September 2012

Latest update: 3 December 2015

Since April 2012 and as of 3 December 2015, 1 640 cases of MERS, including 636 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 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

During the past week, Saudi Arabia reported two additional cases and one additional death in a previously reported case.

The first case is a 35-year-old female from Buraidah. The second case is a 21-year-old female from Riyadh. Both cases are classified as primary cases and are in a critical condition.

As of 3 December 2015, 1 640 cases of MERS, including 636 deaths, have been reported by local health authorities worldwide.

Ebola Virus Disease Epidemic - West Africa - 2014 - 2015

Opening date: 22 March 2014

Latest update: 3 December 2015

An epidemic of Ebola virus disease (EVD) has been ongoing in West Africa since December 2013, 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 2 December 2015, WHO has reported 28 601 cases of Ebola virus disease related to the outbreak in West Africa, including 11 300 deaths. The number of cases in the most affected countries peaked in autumn 2014 and has been slowly decreasing since then. Sierra Leone was declared Ebola-free by WHO on 7 November 2015. The risk of spread, regionally and globally, remains until all the countries in West Africa are declared Ebola-free. The need to maintain effective surveillance even after EVD-free status is declared is underlined by the recent events of re-emergence of cases in previously Ebola free countries.

→Update of the week

According to [WHO](#), no new confirmed cases were reported from Guinea and Liberia in the week leading up to 29 November.

Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015

Latest update: 26 November 2015

Zika virus infections are still spreading in previously unaffected areas of the world. Since 2014, indigenous circulation of Zika virus (ZIKV) has been detected in the Americas. In February 2014, the public health authorities of Chile confirmed the first case of autochthonous transmission of ZIKV infection on Easter Island (Chile) and reported cases until June 2014. Since then, ZIKV infections have spread to the Americas. In 2015, autochthonous cases have been reported for the first time in Brazil, Chile (Easter Island), Colombia, El Salvador, Guatemala, Mexico, Panama, Paraguay, Suriname and Venezuela. Autochthonous cases have also been reported from Cape Verde. In the Pacific area, since the beginning of the year, autochthonous transmission have been reported in French Polynesia, Samoa, Fiji, New Caledonia, Solomon Islands and Vanuatu.

Possible links between ZIKV infection in pregnancy and microcephaly of the foetus have been under investigation since October 2015 when the Brazilian Ministry of Health reported an unusual increase in cases of microcephaly after the ZIKV outbreak in the North eastern states.

Similar findings are also reported from French Polynesia that reported an increase in cases of central nervous system malformations during 2014-2015. These cases occurred during the ZIKV infection outbreak in French Polynesia (September 2013 to March 2014).

In addition, investigations are still on-going regarding a possible association with ZIKV infection and Guillain-Barré syndrome (GBS) in Brazil and French Polynesia. On 1 December, PAHO/WHO issued an [Epidemiological Alert](#) on "neurological syndromes, congenital malformations, and Zika virus infection. Implications for public health in the Americas".

→ Update of the week

On 3 December, the Ministry of Health of Panama reported three autochthonous cases of Zika virus infection. All three cases are residents of the district of Ailigandi, Guna Yala.

In November, the Brazilian Ministry of Health declared a public health emergency in relation to an unusual increase in the number of children born with microcephaly in 2015 suspecting a correlation with ZIKV infections. As of 28 November 2015, 1 248 suspected cases of microcephaly have been reported across 14 states in Brazil (99.7 cases/100 000 live births). In 2000 and 2010 the prevalence of microcephaly in newborns in Brazil was around 5.5 cases/100 000 live births). This data show a twentyfold increase in comparison to the rate observed in previous years. Since 21 November 2015 there is an increase of 509 cases. All 14 states have ongoing ZIKV infection outbreaks. According to media reports, ventricular dilatation is an accompanying complication that has been detected together with microcephaly. In addition, on 1 December, according to the media quoting the Ministry of Health, 28 cases of Guillain-Barré syndrome (GBS) have been reported in Sergipe State. Last week, according to the media, seven cases of GBS have been linked to ZIKV infections in Pernambuco State.

On 24 November 2015, the health authorities of French Polynesia reported an unusual increase of at least 17 cases of central nervous system malformations in fetuses and infants during 2014-2015. The cases are reported from pregnancies that occurred during the ZIKV infection outbreak in French Polynesia (September 2013 to March 2014) at a gestational age of less than six months. Based on the temporal correlation of these cases with the ZIKV infection epidemic, health authorities of French Polynesia hypothesise that ZIKV infection may be associated with these abnormalities if mothers are infected during the first two trimesters of pregnancy.

On 1 December, the Pan American Health Organization / World Health Organization (PAHO/WHO) issued an [Epidemiological Alert](#) on 'neurological syndromes, congenital malformations, and Zika virus infection. Implications for public health in the Americas'. The alert states that 'Given the increase of congenital anomalies, Guillain-Barré syndrome, and other neurological and autoimmune syndromes in areas where Zika virus is circulating and their possible relation to the virus, PAHO/WHO recommends its Member States to establish and maintain the capacity to detect and confirm Zika virus cases, prepare healthcare facilities for the possible increase in demand at all healthcare levels and specialised care for neurological syndromes, and to strengthen antenatal care. In addition, Member States should continue efforts to reduce the presence of mosquito vectors through an effective vector control strategy and public communication'. The alert also reports that: 'According to the preliminary analysis of the investigation conducted by the Brazilian health authorities, the greatest risk of microcephaly or congenital anomalies in newborns is associated with Zika virus infection in the first trimester of pregnancy'.

The document has detailed recommendations for:

Surveillance

Zika infection surveillance should be set up based on the existing surveillance systems for dengue and chikungunya, while taking into account the differences in clinical presentation. As appropriate per a country's epidemiological situation, surveillance should be focused to:

- (i) determine if the Zika virus has been introduced to an area
- (ii) monitor the spread of Zika virus infection once autochthonous transmission is confirmed
- (iii) monitor for neurological and autoimmune complications.

A provisional case definition is provided.

It is also recommended to establish or strengthen surveillance of neurological syndromes for all age groups. PAHO/WHO recommends analysing live birth databases, specifically in relation to malformations/neurological disorders, in order to detect any unusual increase in occurrence.

Surveillance of the neurological anomalies must be integrated into the monitoring of congenital malformations. Event-based surveillance is a useful tool in this situation. For this reason, healthcare professionals involved in antenatal care, as well as child care, should be encouraged to notify all unusual events.

Guidelines for international reporting

National public health authorities are encouraged to inform PAHO/WHO through the established IHR channels, of any laboratory-confirmed cases of Zika virus infection that are registered in the countries and territories of the Region of the Americas. Additionally, PAHO/WHO urges Member States to notify any increase of neurological and autoimmune syndromes (in adults and children), or congenital malformations in newborns that cannot be explained by other known causes.

The document contains also recommendations for laboratory detection of Zika virus, case management (including patient isolation), vector control, personal prevention measures and advice to travellers.

II. Detailed reports

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

Opening date: 2 October 2015

Latest update: 4 December 2015

Epidemiological summary

In week 48, the intensity of influenza activity across the WHO European Region was at low levels in most of the 40 countries that reported data. Sporadic or local geographic spread of influenza was reported in all parts of Europe.

All the different seasonal influenza viruses (A(H1N1)pdm09, A(H3N2), B/Victoria- and Yamagata-lineage) were detected from both sentinel (3%) and non-sentinel sources (2%). Although low numbers of viruses have been subtyped (type A) or ascribed to lineage (type B), A(H1N1)pdm09 viruses have been detected more often than A(H3N2) and B/Victoria lineage, more often than B/Yamagata in both sentinel and non-sentinel specimens than in the same period during the 2014–2015 season.

ECDC assessment

As is usual for this time of year, influenza activity in the European Region remains low, with few influenza viruses detected. No indication of increased mortality due to influenza has been reported through the European monitoring of excess mortality for public health action project ([EuroMOMO](#))

Actions

ECDC monitors influenza activity in Europe during the winter season and publishes its report weekly on the [Flu News Europe website](#).

Rubella - Multistate (EU) - Monitoring European outbreaks

Opening date: 7 March 2012

Latest update: 3 December 2015

Epidemiological summary

No new outbreaks have been detected in the EU since June 2015.

During the period October 2014–September 2015, 2 427 cases of rubella were reported to TESSy. Laboratory confirmation (by serology, virus detection or isolation) was available for 2.8% (n=69) of the cases. The rubella notification rate was less than the elimination target of one case per million population in 20 of the 23 countries that reported consistently over the 12-month period, including 15 countries that reported zero cases.

Web sources: [ECDC measles and rubella monitoring](#) | [ECDC rubella factsheet](#) | [WHO epidemiological brief summary tables](#) | [WHO epidemiological briefs](#) | [Progress report on measles and rubella elimination](#) | [Towards rubella elimination in Poland](#)

ECDC assessment

The WHO has targeted the elimination of measles and rubella in the 53 Member States of the WHO European region. Elimination is defined as the absence of endemic cases in a defined geographical area for a period of at least 12 months, in the presence of a well-performing surveillance system. Regional elimination can be declared after 36 or more months of the absence of endemic measles or rubella in all Member States. Although progress has been made towards elimination, this goal has not yet been achieved. At the third [meeting](#) of the Regional Verification Commission for measles and rubella in November 2014, based on country reports on 2013 data, for rubella, 16 EU/EEA countries were declared to have interrupted endemic transmission, six of which were classified as at risk of reestablishment. Eight countries were classified as still having endemic transmission and five countries were classified as inconclusive.

Actions

ECDC closely monitors rubella transmission in Europe by analysing the cases reported to the European Surveillance System and through its epidemic intelligence activities on a monthly basis. Twenty-four EU and two EEA countries contribute to the enhanced rubella surveillance. The purpose of the enhanced rubella monitoring is to provide regular and timely updates on the rubella

situation in Europe in support of effective disease control, increased public awareness and the achievement of the 2015 rubella and congenital rubella elimination target.

Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011

Latest update: 3 December 2015

Epidemiological summary

EU Member States

No new outbreaks or updates identified since the last monthly update in October 2015.

According to media [reports](#), in Romania, the Ministry of Health is preparing a bill, according to which vaccination of children will be compulsory for enrolment in kindergarten or school. Vaccination against hepatitis B, diphtheria, tetanus, pertussis, polio, measles, mumps and rubella are going to become mandatory.

Rest of the world

Asia

Malaysia

A three-fold rise in measles this year is reported in Malaysia involving 37 separate outbreaks that have resulted in than 602 cases including two deaths.

Pakistan

An outbreak is reported in Baluchistan with three deaths and an unknown number of cases as of 19 November. A vaccination team was sent to the area.

Africa

Egypt

There have been around 5 000 children infected with measles since January 2015. An immunisation campaign started on 31 Oct 2015 and was expected to last until 21 Nov 2015 with the target of vaccinating 24 million children from 9 months to 10 years old against measles and rubella.

Cameroon

A measles epidemic has been increasing across Cameroon, with 858 cases recorded mid-November, and is now spreading to remote and hard-to-reach communities. Over the past six weeks, the epidemic has gained momentum in the northern areas of the country which are currently under Boko Haram 'control'. Most of the cases (587) are recorded in the Mokolo health district in the far north close to the Chadian and Nigerian border, raising the risk of measles epidemic spreading to two more countries.

Nigeria

Measles continues to cause outbreaks across northern states, with [Katsina](#) (2781 cases, 203 deaths) and [Kebbi](#) (329 cases, 3 deaths). In Abuja, Federal Capital Territory, an outbreak affects a camp for internally displaced persons and 10 children are reported to have died as of 20 November 2015. In Niger State, 109 cases of measles including five deaths have been recorded in the past ten months. Immunisation campaigns are planned.

South Sudan

Since the beginning of 2015, 1 280 suspected cases have been reported. Of these, 460 cases have been investigated countrywide and 40 (9%) were laboratory confirmed measles (IgM+). Measles case based surveillance, investigation, and routine vaccination are ongoing.

Publication in MMWR

[Progress toward Regional Measles Elimination — Worldwide, 2000–2014](#)

Web sources: [ECDC measles and rubella monitoring](#) | [ECDC/Euronews documentary](#) | [MedISys Measles page](#) | [EUVAC-](#)

[net ECDC](#) | [ECDC measles factsheet](#)

ECDC assessment

During the 12-month period from October 2014 to September 2015, 4 202 cases were reported by 30 EU/EEA countries. Twenty-five countries reported consistently throughout this period.

Germany accounted for 62.6% of the cases reported during this period. In 12 of the countries reporting consistently, the measles notification rate was less than the elimination target of one case per million population, including seven countries which reported zero cases during the 12-month period. Thirteen consistently reporting countries had a notification rate above this target, the highest reported by Croatia (50.4 cases per million).

Measles is targeted for elimination in Europe. Elimination is defined as the absence of endemic cases in a defined geographical area for a period of at least 12 months, in the presence of a well-performing surveillance system. Regional elimination can be declared after 36 or more months of the absence of endemic measles or rubella in all Member States.

Although progress has been made towards elimination, this goal has not yet been achieved. At the third [meeting](#) of the Regional Verification Commission for measles and rubella in November 2014, based on country reports on 2013 data, 14 EU/EEA countries were declared to have interrupted measles transmission, five of which were classified as at risk of the reestablishment of endemic transmission. Eight countries were classified as still having endemic transmission and seven countries were classified as inconclusive.

Actions

ECDC monitors measles transmission and outbreaks in EU and neighbouring countries in Europe on a monthly basis through enhanced surveillance and epidemic intelligence activities.

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005

Latest update: 3 December 2015

Epidemiological summary

During the last week, Afghanistan reported one new wild poliovirus type 1 (WPV1) case and one new WPV1 environmental positive sample. Pakistan reported two new wild poliovirus type 1 (WPV1) cases and three new environmental samples positive for WPV1. One new case of circulating vaccine-derived poliovirus type 1 (cVDPV1) was reported in the past week in Lao People's Democratic Republic.

In 2015, wild poliovirus transmission is at the lowest levels ever, with fewer cases reported from fewer countries than ever before. In 2015, 60 wild poliovirus cases have been reported from two countries: Pakistan (43 cases) and Afghanistan (17 cases), compared with 315 cases from nine countries during the same period in 2014. In 2015 so far, 21 cases of circulating vaccine-derived poliovirus (cVDPV) have been reported to WHO, compared with 47 for the same period in 2014. The cases this year are from Madagascar (10), Laos (5), Ukraine (2), Pakistan (2 cases), Nigeria (1), and Guinea* (1).

*previously reported in Mali.

On 1 December, according to a [press release of the Ministry of Health of India](#), a two-year-old child from Delhi suffering from immunodeficiency was diagnosed with a rare vaccine-derived polio virus type 2 (VDPV2) in the first week of November. Only about 100 such detections in cases with immunodeficiency have been documented globally since 1961. Ongoing poliovirus surveillance, including environmental surveillance has not revealed any poliovirus circulation in the area. A polio immunisation round in all children under 5 years has been conducted in the area to mitigate the risk of spread of VDPV.

In Ukraine, national immunization days are taking place from 30 November to 4 December using trivalent oral polio vaccine (OPV).

The Organisation of Islamic Cooperation (OIC) [reaffirmed their commitment to poliovirus eradication](#) and urged all polio affected countries to implement their National Emergency Action Plans, at the Fifth Session of the Islamic Conference of Health Ministers. Commonwealth leaders united in Malta [to recommit to ending polio](#).

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.

The confirmed circulation of wild poliovirus in several countries and the documented exportation of wild poliovirus to other countries support the fact that there is a potential risk of wild poliovirus being re-introduced to the EU/EEA. The highest risk of large poliomyelitis outbreaks occurs in areas with clusters of unvaccinated populations and in people living in poor sanitary conditions, or a combination of the two.

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](#).

Public health risks - Multistate - Refugee movements

Opening date: 4 November 2015

Latest update: 3 December 2015

Epidemiological summary

Vaccinations among refugees

A vaccination campaign in refugee centres in the city of Stuttgart, Germany, was [announced](#) for the beginning of December 2015 and expected to cover 9 200 people; vaccination against influenza, measles and chickenpox will be prioritised.

On 30 November, public health authorities in Sweden [announced](#) that vaccination against measles, rubella, diphtheria, tetanus, polio and whooping cough should be given to people seeking asylum in Sweden, regardless of age. Children under 18 should be offered vaccination against hepatitis B, and children under six, vaccination against Haemophilus influenzae type b (Hib) and pneumococcus.

On 27 November, [The Communicable Disease Doctors organisation in Norway](#) recommended flu vaccination to be given to all asylum seekers in arrival centres and emergency overnight accommodation as occurrence of outbreaks in such settings is likely and will overburden the healthcare services.

Influenza, scabies and shigellosis cases in refugee centres

According to [media](#) citing local physicians on 27 November, scabies is spreading among asylum seekers in the canton of St Gallen, Switzerland. Cases of seasonal influenza and scabies detected among refugees in the Calais refugee camp have been reported by the [Media](#) on 2 December.

In November 2015, several countries (Austria, Greece, Germany, Finland, Sweden and Slovenia) reported cases of shigellosis among refugees and personnel staff in refugee centres through the Early Warning and Response System (EWRS) and the Epidemic Intelligence Information System - Food- and Waterborne diseases (EPIS-FWD) platform. A list of options for response was formulated by ECDC and published in a [rapid risk assessment on shigellosis among refugees in the EU](#).

Heightened risk of international spread of poliovirus

In a [statement](#) on 25 November, WHO acknowledged that large population movements across the Middle East and from Afghanistan and Pakistan create a heightened risk of international spread of polio. There is a risk of missing polio vaccination among refugee and mobile populations, adding to missed and under vaccinated populations in Europe, the Middle East and Africa.

Other news

According to [media](#), medical authorities in collaboration with the Red Cross in Denmark are considering mandatory tuberculosis testing for all refugees and asylum seekers upon arrival.

Source: [UNHCR](#) | [ScienceDirect](#) | [Reuters](#) | [WHO](#) |

ECDC assessment

Refugees are not currently a threat for Europe with respect to communicable diseases, but they are a priority group for communicable disease prevention and control efforts because they are more vulnerable. The risk to refugees arriving in Europe of contracting communicable diseases has increased because of the current overcrowding at reception facilities, and the consequent compromising of hygiene and sanitation arrangements.

While the risk of mosquito-borne diseases has been reduced as a result of the winter, the risk of diseases whose spread are facilitated by overcrowding and lower temperatures has increased as a result of the likely increased close gathering of refugees seeking shelter from the cold weather. It is therefore expected that the incidence of respiratory and gastrointestinal conditions will increase in the coming months.

Recent weeks have seen reports of emerging episodes of communicable diseases affecting the refugee population. Of concern is the emergence of 27 cases of louse-borne relapsing fever (LBRF) in different locations along the route that the refugees arriving in Italy are following. The probable transmission of LBRF among refugee communities in the EU indicates that more cases may be seen in the near future, unless appropriate hygiene measures are rapidly implemented. Reports of cases of shigellosis among refugees is also a source for concern.

Low coverage for some vaccines, along with low immunity for some diseases, may result in susceptible refugees developing diseases such as measles and chicken pox, given the high incidence of these in some areas 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.

The risk to European residents of being affected by outbreaks occurring among refugee populations remains extremely low since the hygiene levels, overcrowding and limited access to clean water responsible for their transmission are specific to the reception facilities in which they are occurring.

Actions

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 posted on the ECDC website in September 2015.

ECDC prepared:

- a [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
- a [RRA](#) on cutaneous diphtheria among recently arrived refugees and asylum seekers in the EU
- a [RRA](#) on the risk of importation and spread of malaria and other vector-borne diseases associated with the arrival of migrants in the EU
- a [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.

Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013

Latest update: 3 December 2015

Epidemiological summary

As of 3 December 2015, 681 laboratory-confirmed cases of human infection with avian influenza A(H7N9) viruses, including at least 275 deaths, have been reported.

Cases reported in China since March 2013 have the following geographical distribution: Zhejiang (188), Guangdong (181), Jiangsu (78), Fujian (63), Shanghai (48), Hunan (26), Anhui (32), Hong Kong (13), Xinjiang Uygur Zizhiqu (10), Jiangxi (9), Beijing (6), Shandong (6), Guangxi (4), Henan (4), Taiwan (4), Jilin (2), Guizhou (2) and Hebei (2). 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.

During 2015, there have been continued avian influenza A(H7N9) virus detections in the animal population in multiple provinces in 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 affected and possibly 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 in Europe.

Actions

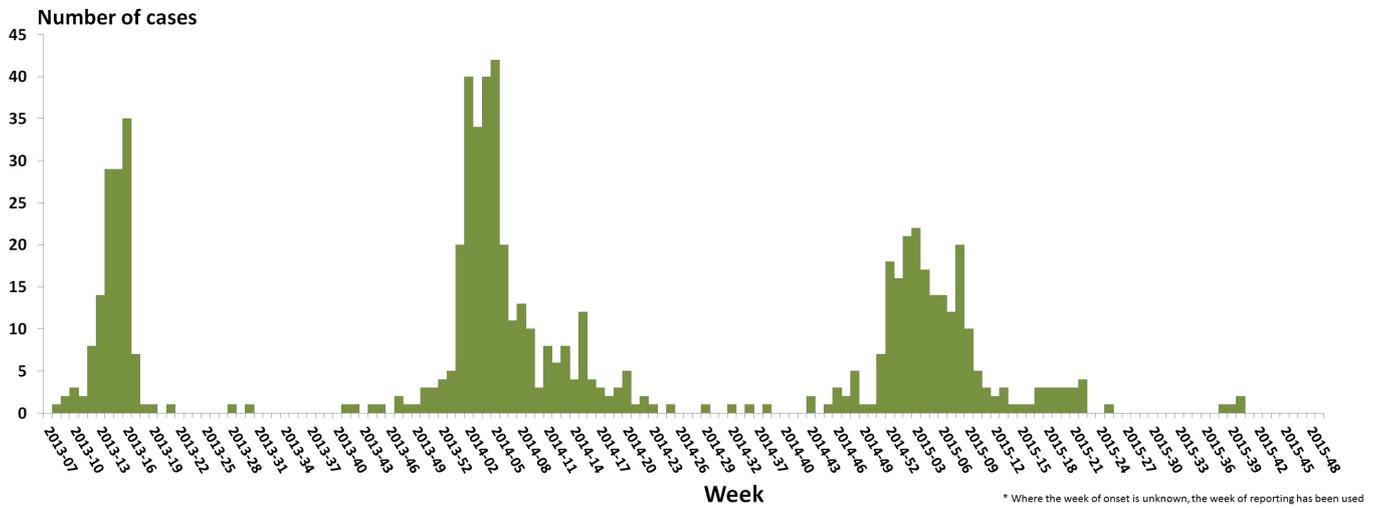
The Chinese health authorities continue to respond to this public health event with enhanced surveillance, epidemiological and laboratory investigation, including scientific research.

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 week of reporting (weeks 07/2013 to 49/2015**)

Source: ECDC



Distribution of confirmed cases of A(H7N9) by week of onset (n=681) from February 2013 until 3 December 2015

Source: ECDC



Influenza A(H5N1) and other strains of avian flu - Multistate (world) - Monitoring globally

Opening date: 15 June 2005

Latest update: 3 December 2015

Epidemiological summary

Update: No new update from WHO on human cases of influenza A(H5N1) virus since 17 July 2015.

Summary: From 2003 through to 26 November 2015, 844 laboratory-confirmed human cases of avian influenza A(H5N1) virus infection have been officially reported to WHO from 16 countries. Of these cases, 449 have died.

Outbreaks in birds

In November 2015, the French authorities notified about an outbreak of highly pathogenic avian influenza of subtype A(H5N1) and A(H5N2) in holdings where poultry or other captive birds are kept.

On 30 November 2015 Italy reported an outbreak of low pathogenic A(H5N2) in a Turkey farm in Emilia Romagna. Necessary measures have been taken by the local authorities.

According to recent reports received by [World Organisation for Animal Health](#) (OIE), various influenza A(H5) subtypes, such as influenza A(H5N1), A(H5N2), A(H5N6) and A(H5N8), continue to be detected in birds in West Africa and Asia.

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

ECDC assessment

Most human infections of avian influenza are the result of direct contact with infected birds or contaminated environments, and countries with large poultry populations in close contact with humans are considered to be most at risk of bird flu outbreaks. Therefore, additional human cases are not unexpected. There are currently no indications of a significant change in the epidemiology associated with any clade or strain of the A(H5N1) and A(H7N9) virus from a human health perspective. However, vigilance for avian influenza in domestic poultry and wild birds in Europe remains important.

Although an increased number of animal-to-human infections was reported by Egypt during the first half of 2015, this increase is not thought to be related to virus mutations but rather to more people becoming exposed to infected poultry.

Although the influenza A(H5) viruses detected in birds might have the potential to cause disease in humans, to date, there have been no reported human infections with these viruses with the exception of human infections with influenza A(H5N1) and A(H5N6) viruses. No human infections with influenza A(H5N1) have ever been reported from Europe. The risk to people from these infections in wild birds, backyard flocks and commercial poultry is considered to be low.

Actions

ECDC monitors the worldwide A(H5N1) situation through epidemic intelligence activities on a monthly basis in order to identify significant changes in the epidemiology of the virus. ECDC re-assesses the potential of a changing risk for A(H5N1) to humans on a regular basis.

ECDC published a [Rapid Risk Assessment](#) covering A(H5N1) in Egypt on 13 March 2015.

ECDC published an [epidemiological update](#) about A(H5N1) in Egypt on 10 April 2015.

Emergence of plasmid-mediated colistin resistance mechanism MCR-1 in *E. coli* - China

Opening date: 20 November 2015

Latest update: 3 December 2015

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 in-patients with infection. The authors hypothesise that plasmid-mediated colistin resistance originated in animals and subsequently spread to humans. The emergence of this novel mechanism of resistance is likely related to the high consumption of colistin in animal husbandry in China.

On 3 December, 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. This is the first time plasmid-mediated resistance to polymyxins (MCR-1) in *E. coli* has been detected in humans and food in Europe.

Web sources: [Statens Serum Institut](#) | [EURL-AMR at the Danish Technical University](#) |

ECDC assessment

This is the first time plasmid-mediated resistance to polymyxins (MCR-1) in *E. coli* has been detected in humans and food in Europe. The detection of plasmid-mediated resistance to colistin in *E. coli* with the potential for spread to other human pathogens is of concern, as colistin remains a last resort antimicrobial for the treatment of infections caused by Gram-negative bacteria resistant to multiple antibiotics including the carbapenems. The detection of MCR-1 in *E. coli* in food and human isolates in China and now Denmark shows that the *mcr-1* gene has already spread to other countries through trade and travel.

15/30

Polymyxins, including colistin, are classified by WHO as critically important antibiotics for human medicine. The JIACRA report published jointly by ECDC, EFSA and EMA in January 2015 shows that the use of polymyxins in the EU/EEA is 600 times higher in food animals than in humans.

Actions

ECDC will post this new update in the Epidemic Intelligence Information System (EPIS) Antimicrobial Resistance-Healthcare-associated infections (AMR-HAI). ECDC will take this new development into account in the 'Expert opinion on the risks from digestive colonisation with multidrug-resistant *Enterobacteriaceae* after international travel and implications for surveillance' that will be produced in 2016.

Dengue - Multistate (world) - Monitoring seasonal epidemics

Opening date: 20 April 2006

Latest update: 3 December 2015

Epidemiological summary

Europe

No new autochthonous cases reported since the last monthly update.

Asia

In **India**, the number of dengue cases continue to rise in Delhi with over 15 000 cases, including 38 deaths, recorded since the start of the year. More than 640 cases were reported in November alone, according to [media](#) quoting local health authorities. The majority of cases have been notified in North Delhi (5 250 cases) followed by South Delhi (4 440 cases) and East Delhi (3 150 cases). In addition, there are ongoing dengue outbreaks in Punjab, Maharashtra and Tamil Nadu states. In **Pakistan**, high dengue activity is reported in Punjab province and Karachi (Sindh province).

In **Taiwan**, the average weekly number of new cases in Kaohsiung City has been declining over the past few weeks. However, the cumulative number of cases has reached more than 15 000, exceeding the number of cases reported for the whole of last year (14 999), according to the [Taiwan CDC](#).

Thailand has notified an additional 6 000 cases of dengue fever nationally during the past week alone bringing the cumulative number of cases during the first 11 months of the year to 123 168 across all 77 provinces, according to [media](#) quoting health officials in Thailand. **Singapore** has recorded 9 466 dengue cases and 3 deaths nationally (as of 27 November) which is significantly less compared to the same time period in 2014 when approximately 17 000 cases were notified, according to the [National Environmental Agency](#) (NEA).

Caribbean

In **Puerto Rico**, the weekly number of suspected cases reported in weeks 43 and 44 remained below the epidemic threshold and historical average. As of 25 November, 1 634 suspected and 35 confirmed cases have been reported so far in 2015. DENV-2 and DENV-4 have been the predominant serotypes circulating in the last eight weeks, according to the [US CDC](#).

Americas

As of 27 November, more than 2 million dengue fever cases have been reported in the Americas and Caribbean region, according to the [Pan American Health Organization](#) (PAHO). **Brazil** accounts for more than 1.5 million of the cases, a significant increase compared to the same time period in 2014 when 555 000 cases were reported. In addition, the number of dengue related deaths has increased from 453 in 2014 to 761 so far in 2015. The highest incidence of dengue is reported in Goiás, São Paulo and Pernambuco states.

Pacific Islands and Territories

There is active circulation of DENV-1 in **French Polynesia** with 17 cases reported for the week ending 22 November 2015. There were five dengue hospitalisations during November. There are ongoing outbreaks of DENV-3 in **Samoa** and American **Samoa** and DENV-2 in **Fiji**, according to the [Pacific Public Health Surveillance Network](#) (PACNET).

There is an ongoing dengue outbreak on **Hawaii Island**. As of 2 December, 122 confirmed cases have been reported (106 residents and 16 visitors), according to the Hawaii Department of Health.

Africa

16/30

In **Sudan**, the number of cases in Darfur has increased to a cumulative caseload of 119 deaths and 428 suspected cases (period 29 August – 20 November), according to an [ECHO daily flash report](#) on 26 November. [Media](#) report that many patients who have tested positive for severe dengue fever were also infected with malaria.

Web sources: [ECDC Dengue](#) | [Healthmap Dengue](#) | [MedISys](#) | [ProMed Asia, Americas, Africa](#) |

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

Opening date: 9 December 2013

Latest update: 3 December 2015

Epidemiological summary

Europe

No autochthonous cases of chikungunya virus infection have been reported in EU Member States so far in 2015. According to [InVS](#), between 1 May and 27 November, 30 imported cases of chikungunya were reported in **France** in areas where the vector is present.

Asia

In **Philippines**, 12 suspected and two confirmed cases have been reported in South Cotabato province (as of 10 November), according to [media](#) quoting local health authorities. In **Thailand**, from 1 January to 31 October 2015, 15 cases of chikungunya virus infection were reported from seven provinces. No deaths were recorded, according to [media](#) quoting the Bureau of Epidemiology in Thailand.

Americas

According to the latest update from the [WHO Pan American Health Organization](#) (WHO PAHO), since the beginning of the year and as of 20 November 2015, 622 969 suspected and confirmed cases of chikungunya virus infection and 76 deaths have been reported in the WHO Region of the Americas.

USA

As of 1 December, 623 chikungunya virus disease cases have been reported from 43 US states so far this year, according to the [US CDC](#). All reported cases occurred in travellers returning from affected areas. No locally transmitted cases have been reported. In addition, 201 chikungunya cases have been reported from US territories. All were locally transmitted cases reported from **Puerto Rico** and the **US Virgin Islands**.

Pacific region

There are ongoing outbreaks on **Marshall Islands** and **Tuvalu**, according to the [Pacific Public Health Surveillance Network](#).

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.

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

Opening date: 24 September 2012

Latest update: 3 December 2015

Epidemiological summary

As of 3 December, 1 640 cases of MERS, including 636 deaths, have been reported by local 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 sustained human-to-human community transmission is unlikely, the residential cluster of cases reported from Saudi Arabia is a reminder that transmission to unprotected close contacts, not only in healthcare settings, remains possible, as also documented in outbreaks in South Korea and the United Arab Emirates.

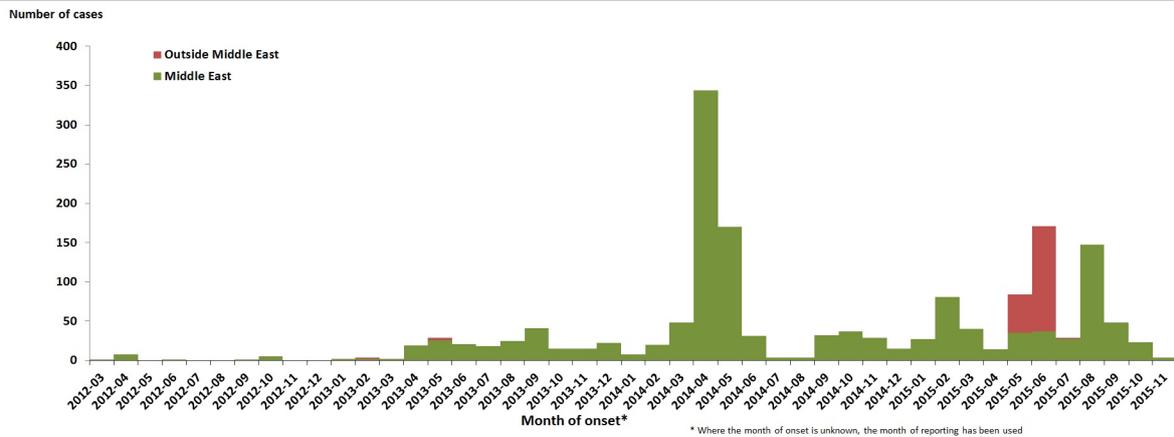
Actions

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

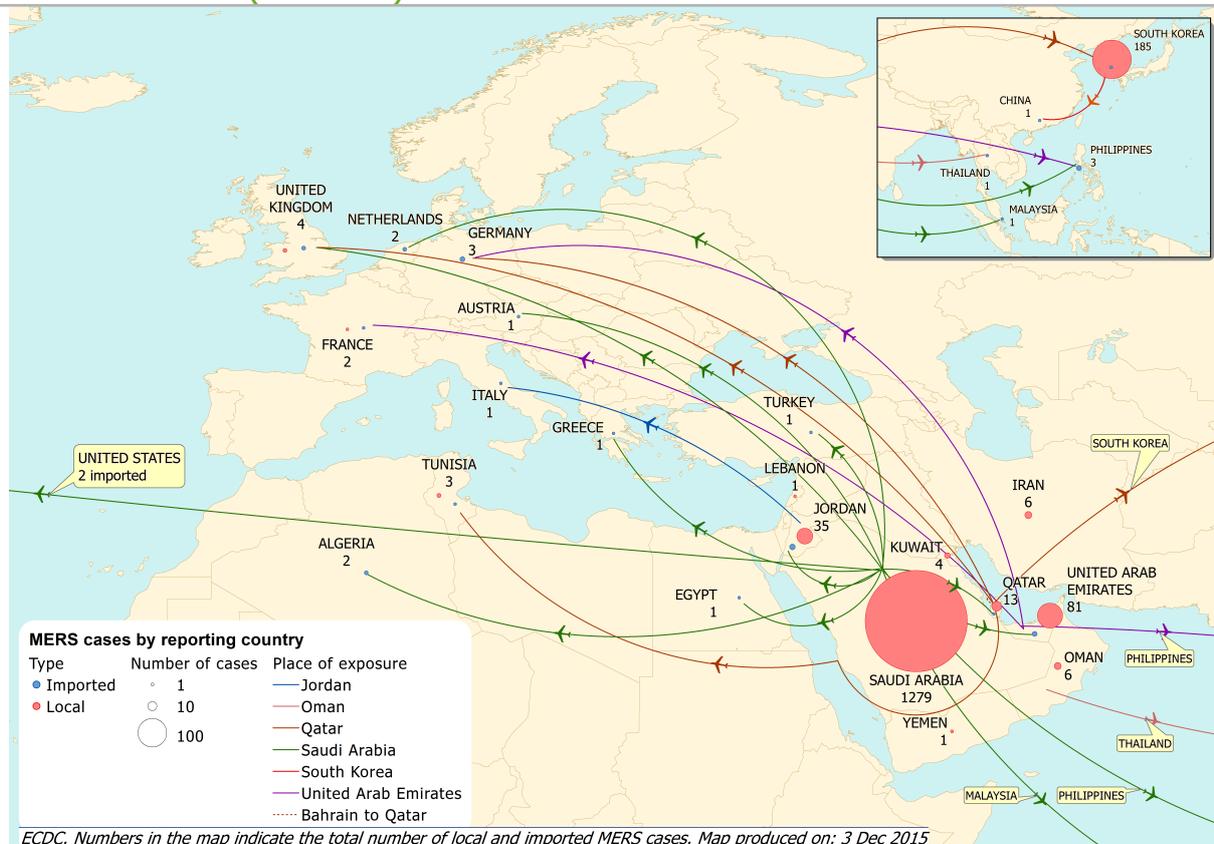
Cases of MERS-CoV by country of reporting, March 2012 – 3 December 2015 (n=1 640)

Region	Country	Number of cases	Number of deaths
Middle East	Saudi Arabia	1279	549
	United Arab Emirates	81	11
	Qatar	13	5
	Jordan	35	14
	Oman	6	3
	Kuwait	4	2
	Egypt	1	0
	Yemen	1	1
	Lebanon	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	1	0
Americas	United States of America	2	0
Global		1640	636

Distribution of confirmed cases of MERS-CoV by first available date and place of probable infection, March 2012 – 30 November 2015 (n=1 639)



Distribution of confirmed cases of MERS-CoV by place of probable infection, March 2012 – 3 December 2015 (n=1 640)



Ebola Virus Disease Epidemic - West Africa - 2014 - 2015

Opening date: 22 March 2014

Latest update: 3 December 2015

Epidemiological summary

Distribution of cases as of 2 December 2015:

Countries with ongoing Ebola virus transmission in the human population:

- **Guinea:** 3 804 cases including 3 351 confirmed, and 2 536 deaths
- **Liberia:** 10 675 cases including 3 160 confirmed, and 4 809 deaths, Liberia was declared EVD-free on 3 September 2015. However, a family cluster occurred in the week to 22 November.

Countries with previously widespread and intense transmission:

- **Sierra Leone:** declared Ebola-free on 7 November 2015.

Countries that have reported an initial case or localised transmission:

- Nigeria, Senegal, the USA, Spain, Mali, the UK and Italy.

Situation in West African countries

Guinea

No new cases were confirmed in Guinea during the past week. The most recent case was reported on 29 October, from which a second consecutive blood sample tested negative for Ebola virus on 16 November.

Liberia

No new confirmed cases were reported during the week leading up to 29 November. The 15-year-old boy who tested positive for EVD after admission to a health facility in the Greater Monrovia area on 19 November died on 23 November.

Investigations regarding the origin of infection of the EVD family cluster reported in the week to 22 November are ongoing. So far, 165 contacts have been identified, including 34 high-risk contacts. The Ebola ring vaccination trial has been extended to Liberia following the country's recent cluster of cases. Liberia was previously declared free of Ebola transmission on 3 September 2015.

Sierra Leone

On 7 November WHO declared that Sierra Leone Ebola free and the country has entered a 90-day period of enhanced surveillance scheduled to conclude on 5 February 2016.

Situation among healthcare workers

No new infections in healthcare workers were reported by WHO in the week leading up to 29 November.

Outside of the three most affected countries, with repatriated cases included, there have been 8 cases in Mali, 20 in Nigeria, 3 in Spain (including two repatriated cases), 3 in the UK (including two repatriated cases), 1 in Senegal, 1 in Norway (repatriated), 2 in France (repatriated), 1 in the Netherlands (repatriated), 1 in Switzerland (repatriated), 11 in the USA (7 repatriated) and 1 in Italy (infected in Sierra Leone).

Epicurve: The epicurve shows the confirmed cases in Guinea and Liberia. In order to better represent the tail of the epidemic, only the data for 2015 are shown.

Map: The map shows the distribution of confirmed cases in Guinea and Liberia during the past six weeks.

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](#)

ECDC assessment

This is the largest-ever documented epidemic of EVD, both in terms of numbers and geographical spread. The epidemic of EVD increases the likelihood that EU residents and travellers to the EVD-affected countries will be exposed to infected or ill persons. The risk of infection for residents and visitors in the affected countries through exposure in the community is considered low if they adhere to the recommended precautions. Residents and visitors to the affected areas run a risk of exposure to EVD in healthcare facilities.

The risk of importing EVD into the EU, and the risk of transmission within the EU following an importation, remains low or very low as a result of the range of risk reduction measures that have been put in place by the Member States and by the affected countries in West Africa. However, continued vigilance is essential. If a symptomatic case of EVD presents in an EU Member State, secondary transmission to caregivers in the family and in healthcare facilities cannot be excluded.

The number of confirmed cases has remained low since the end of July. The introduction of an EVD case into unaffected countries remains possible as long as cases exist in any country. With adequate preparation, however, such an introduction can be contained through a timely and effective response. Following the recent report about the previously positive EVD UK nurse, unusual late complications should also be taken into account.

Liberia was declared free of Ebola virus transmission in the human population on 3 September. Following which, Liberia entered a 90-day period of EVD heightened surveillance. Reports of cases during heightened surveillance periods after the tail-end of outbreaks has happened before, is not unexpected and is a sign of the correct functioning of the surveillance. The identification of new EVD cases highlights the importance of maintaining surveillance of EVD cases after the tail-end of the outbreak.

Actions

As of 2 December 2015, ECDC has deployed 95 experts (on a rotating basis) from within and outside the EU in response to the Ebola outbreak. This includes an ECDC-mobilised contingent of experts to Guinea. ECDC is reporting this threat on a weekly basis in the CDTR.

ECDC has updated its website following the WHO declaration on Sierra Leone which has been Ebola-free since 7 November. The latest (13th) update of the [rapid risk assessment](#) was published on 16 October 2015.

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](#).

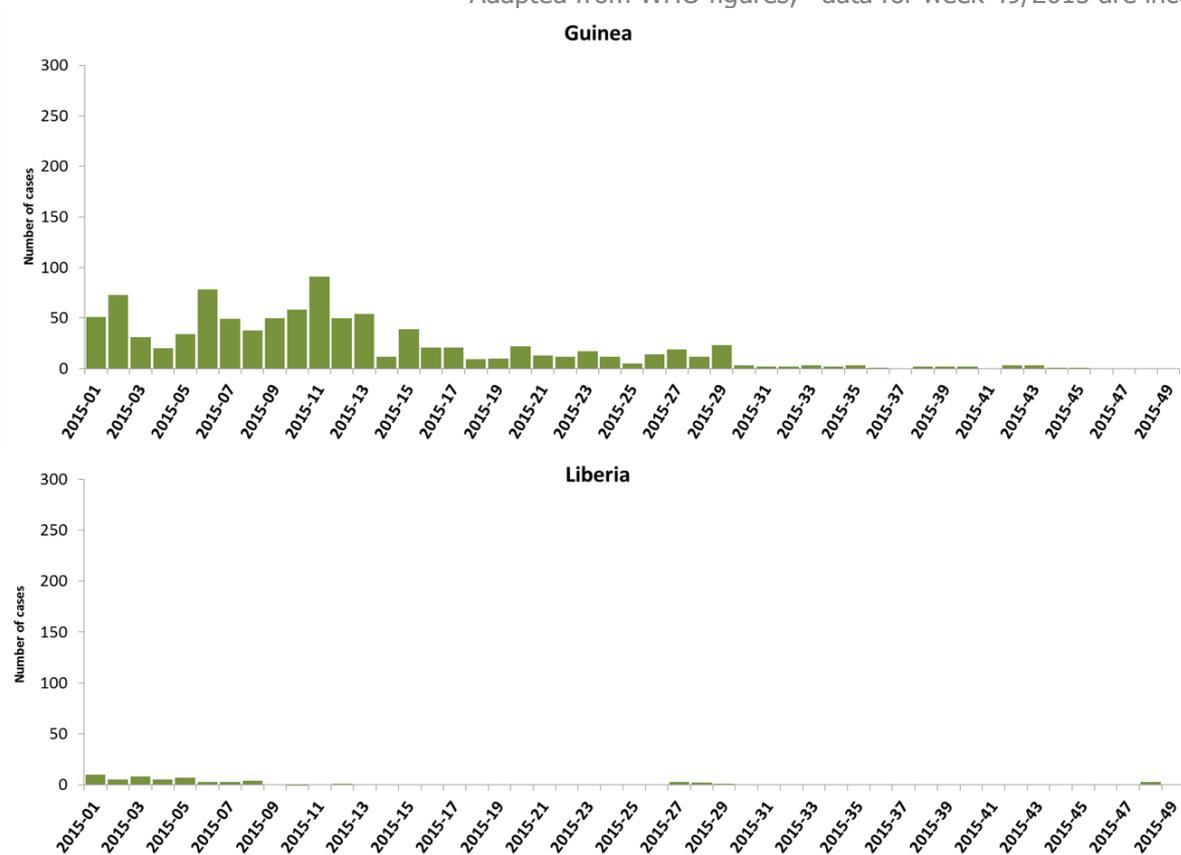
On 6 October 2014, ECDC published [risk of transmission of Ebola virus via donated blood and other substances of human origin in the EU](#).

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](#).

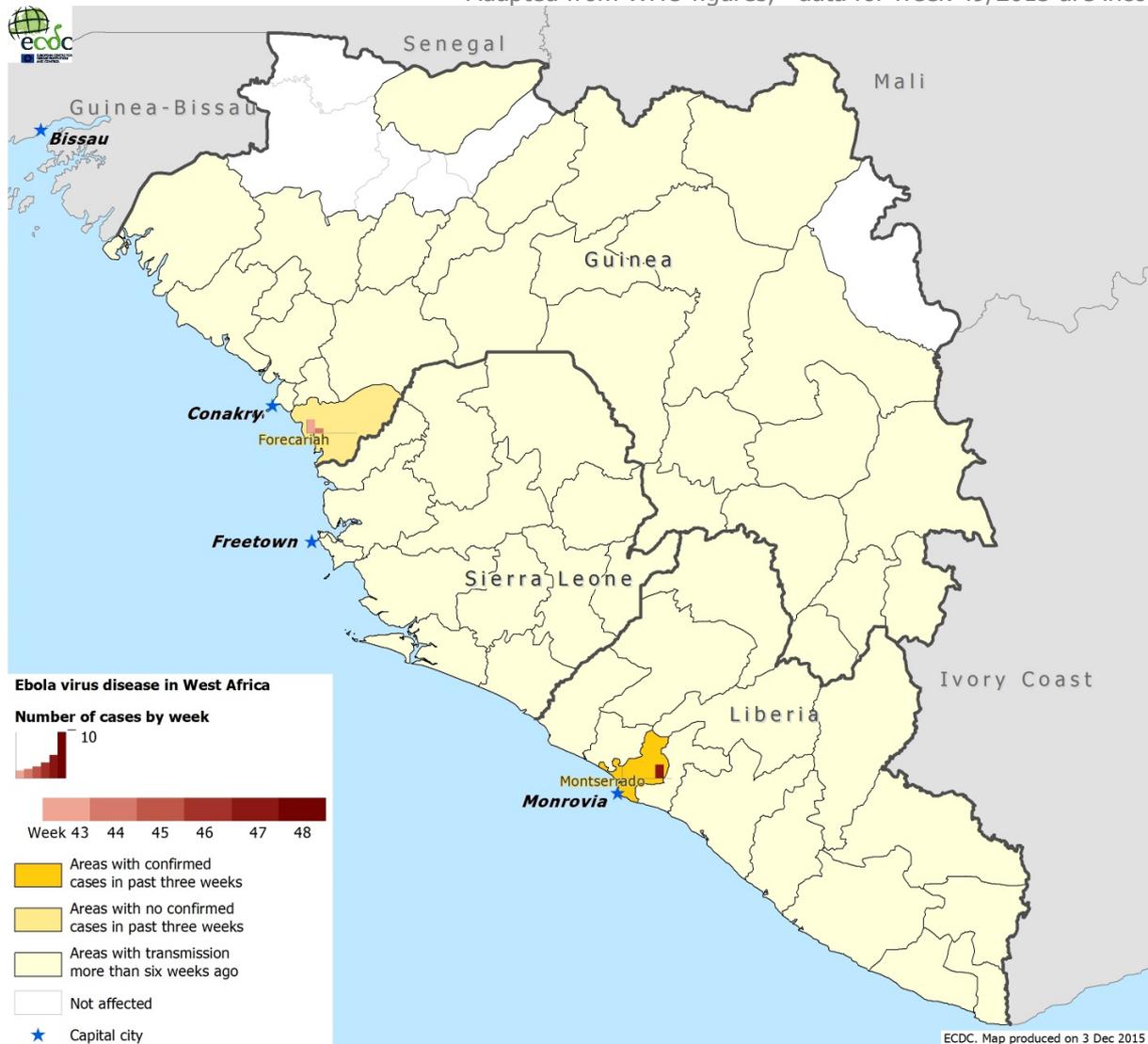
Distribution of confirmed cases of EVD by week of reporting in Guinea and Liberia (weeks 01/2015 to 49/2015)

Adapted from WHO figures; *data for week 49/2015 are incomplete



Distribution of confirmed cases of EVD by week of reporting in Guinea and Liberia (as of week 49/2015)

Adapted from WHO figures; *data for week 49/2015 are incomplete



Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015

Latest update: 26 November 2015

Epidemiological summary

Europe

No autochthonous cases of ZIKV infection have been reported in EU Member States so far in 2015.

Americas

Brazil

In May 2015, the public health authorities of Brazil confirmed autochthonous transmission of ZIKV infection in the north-eastern part of the country. As of 8 October, autochthonous virus transmission had been confirmed in 14 states: Alagoas, Bahia, Ceará, Maranhão, Mato Grosso, Pará, Paraíba, Paraná, Pernambuco, Piauí, Rio de Janeiro, Rio Grande do Norte, Roraima and São Paulo. In addition, between January and July 2015, 121 cases with neurological symptoms or with Guillain-Barré were reported by states in the north-eastern part of Brazil.

In October 2015, the Brazil Ministry of Health reported an unusual increase in cases of microcephaly in the state of Pernambuco and at a lower level in other Northeast states. On 17 November 2015, the Ministry of Health of Brazil through an international health regulation (IHR) message confirmed molecular identification of ZIKV in amniotic fluid samples collected from two pregnant women from Paraíba state whose foetuses have been confirmed with microcephaly by ultrasound examinations.

On 17 November 2015, the Pan American Health Organization (PAHO) issued an epidemiological alert regarding an increase of microcephaly in the northeast of Brazil. In response to the situation, the Brazil Ministry of Health declared a national public health emergency on 11 November. As of 28 November 2015, 1 248 suspected cases of microcephaly have been identified in 311 municipalities across 14 states of Brazil. Pernambuco state has reported the highest number of cases (646) followed by the states of Paraíba (248), Rio Grande do Norte (79), Sergipe (77), Alagoas (59), Bahia (37), Piauí (36), Ceará (25), Rio de Janeiro (13), Maranhão (12), Tocantins (12), Goiás (2), Distrito Federal (1) and Mato Grosso do Sul (1). Seven deaths were reported among these cases, and five additional deaths in Rio Grande do Norte and Piauí are currently being investigated.

On 1 December, according to the media quoting the Ministry of Health, 28 cases of Guillain-Barré syndrome (GBS) were reported in Sergipe State. Last week, according to the media, seven cases of GBS have been linked to ZIKV infections in Pernambuco State.

On 25 November 2015, according to the media quoting the Flavivirus Laboratory at the Oswaldo Cruz Institute, seven cases of GBS have been linked to ZIKV infections in Pernambuco state. The number of cases of GBS grew significantly in the north east of the country between April and June 2015, shortly after the ZIKV epidemic started. In Rio Grande do Norte, there have been 24 cases of GBS, four times more than the historical average. In Pernambuco state, 130 cases have been reported, which is a significant increase compared with the last reports. There have also been increases in Maranhão (14 cases) and Paraíba (6 cases) states. Investigations are ongoing regarding a possible association with ZIKV infection.

Colombia

On 16 October, the first cases of ZIKV infections were reported in Colombia, with nine confirmed cases in the Bolívar department. From 16 October to 21 November, Colombian authorities reported 578 confirmed cases and 2 635 suspect cases.

Guatemala

On 1 December, media, quoting authorities, reported 17 suspected cases of ZIKV infection, 14 of which among hospital employees. Blood samples have been collected and sent to the US for analysis.

Paraguay

On 27 November, the Paraguay IHR National Focal Point (NFP) reported the confirmation of six ZIKV cases in the city of Pedro Caballero – border of Brazil.

Mexico

On 26 November, Authorities acknowledged three ZIKV cases, including two autochthonous cases reported from Nuevo León and Chiapas. The imported cases had a recent travel history in Colombia.

Venezuela

On 27 November, the Venezuela IHR National Focal Point (NFP) notified seven ZIKV autochthonous suspected cases.

El Salvador

On 24 November, the El Salvador IHR National Focal Point (NFP) notified the confirmation of three confirmed autochthonous cases of ZIKV infection. On 3 December, media reported 240 ZIKV cases across the country.

Chile (Easter Island)

According to WHO-PAHO, autochthonous circulation of ZIKV was reported in Easter Island from February to June 2014. Chile did not report ZIKV cases in 2015.

Suriname

On 12 November, health authorities reported through IHR five ZIKV cases.

Panama

On 3 December, the Ministry of Health of Panama reported three autochthonous cases of Zika virus infection. All three cases are residents of the district of Ailigandi, Guna Yala (Northeast).

Pacific region

French Polynesia

On 24 November 2015, the health authorities of French Polynesia reported an unusual increase of at least 17 cases of central nervous system malformations in foetuses and infants during 2014-2015. The cases are reported from pregnancies that occurred during the ZIKV infection outbreak in French Polynesia (September 2013 to March 2014) at a gestational age of less than six months. None of the pregnant women described clinical signs of ZIKV infection, but the four tested were found positive by IgG

serology assays for flavivirus, suggesting a possible asymptomatic ZIKV infection. Further serological investigations are ongoing. Based on the temporal correlation of these cases with the ZIKV epidemic, the health authorities of French Polynesia hypothesise that ZIKV infection may be associated with these abnormalities if mothers are infected during the first or second trimester of pregnancy.

Other countries

Since the beginning of the year, sporadic autochthonous cases have been reported in Samoa, Fiji, New Caledonia, Solomon Islands and Vanuatu.

in New Zealand, from July to September 2015, New Zealand report two imported cases from Samoa.

Asia

Indonesia

On 15 November, the media reported the first ZIKV case in the country. There is no information available about the travel history of this case.

Web sources: [ECDC Zika Factsheet](#) | [WHO DON](#) | [PAHO](#) | [Colombian MoH](#) | [New Zealand MoH](#) | [Media 1](#) | [Media 2](#)

ECDC assessment

On 1 December PAHO published an epidemiological alert recommending its Member States to establish and maintain the capacity to detect and confirm ZIKV infections, to prepare healthcare facilities for the possible increase in demand at all healthcare levels and for specialised care for neurological syndromes. PAHO also recommends to strengthen antenatal care and to continue efforts to reduce the presence of mosquitos through vector control and public communication.

Imported ZIKV infection cases in the EU Overseas Countries and Territories and the EU Outermost Regions, with onward autochthonous transmission in EU Members States in continental Europe during the summer season in areas where *Aedes albopictus* are established, cannot be excluded. Vigilance during the mosquito season is thus required in areas where a potential vector is present as early detection of cases is essential to reduce the risk of autochthonous transmission.

Clinicians and travel medicine clinics should be aware of the evolution of ZIKV infections in the affected areas and should include ZIKV infection in their differential diagnosis for travellers from those areas. Fever and/or macular or papular rash not attributable to dengue or chikungunya infection among travellers, especially among pregnant women, returning from areas currently experiencing ZIKV infection outbreaks should prompt a possible investigation for ZIKV infection. In addition, blood safety authorities need to be vigilant regarding the epidemiological situation and might wish to consider deferral of donors with relevant travel history, in line with measures defined for West Nile virus.

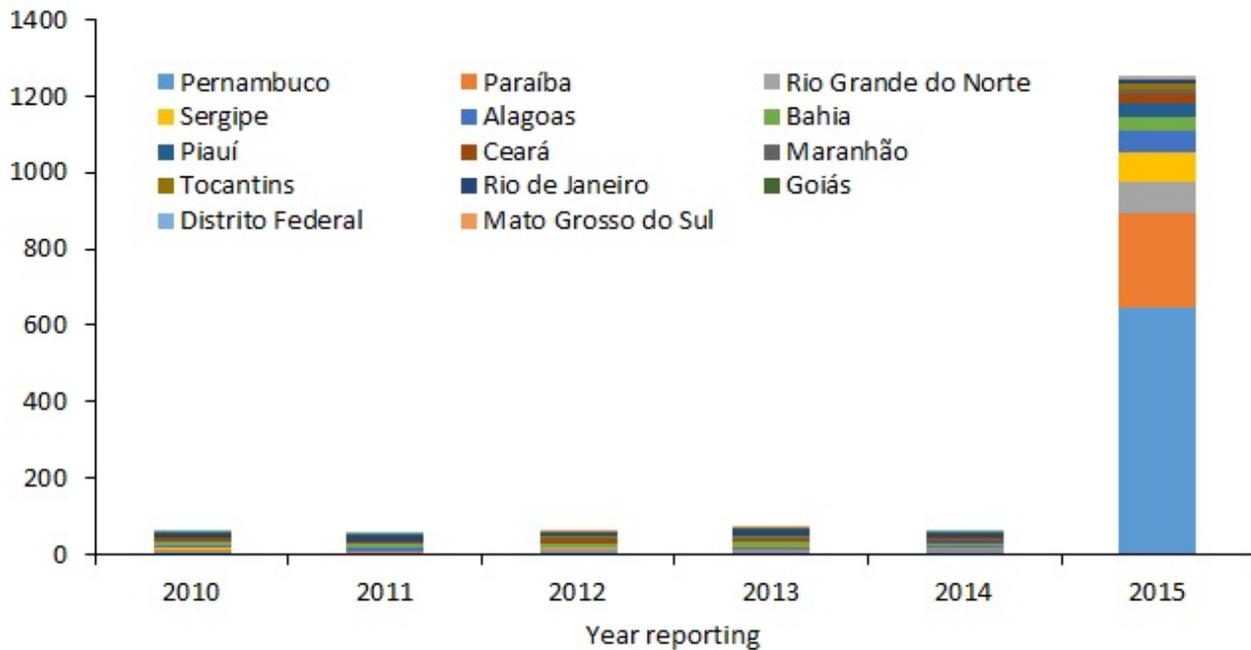
This is the first time that ZIKV infections during pregnancy have been suspected of causing congenital malformations. The detection of Zika virus in amniotic fluid in two fetuses with microcephaly has not been previously documented. Further investigations are being conducted to confirm the link between this increase in microcephaly incidence or other neurological malformations and the Zika virus outbreaks in Brazil and French Polynesia.

Actions

On 24 November 2015, ECDC published a [rapid risk assessment](#) on Microcephaly in Brazil potentially linked to the Zika virus epidemic.

Number of cases of microcephaly reported annually in the fourteen Brazilian states, 2010–2015

Number of cases



Countries with reported confirmed autochthonous cases of ZIKV infection in 2015, as of 4 December 2015



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