COMMUNICABLE DISEASE THREATS REPORT

CDTR
Week 51, 18-24 December 2016

All users

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

Increase in Salmonella Stourbridge cases - Germany

Opening date: 12 December 2016 Latest update: 23 December 2016

Since July 2016, Germany has recorded an increase in the number of *Salmonella* Stourbridge infections, with 14 cases notified. *Salmonella* Stourbridge (*S.* Stourbridge) is a rare serotype in the European Union. Between 2010 and 2015, this serotype was reported by seven Member States and the annual number of confirmed cases has ranged from eleven to 22 cases, with a median of 15 cases. During this period, France and Germany have accounted for 61% and 21% of the reported cases, respectively.

➔Update of the week

There have been no new cases notified over the past week.

Type E botulism likely associated with fish consumption – Germany and Spain

Opening date: 29 November 2016 Latest update: 23 December 2016

Five cases of botulism caused by botulinum neurotoxin type E (BoNT E) have been diagnosed in November 2016 in two countries: three cases in males in Germany and two cases in partners (one male and one female) in Spain. A sixth patient with a Kazakh background was reported by Germany with onset of illness on 11 December 2016.

➔Update of the week

Six cases of botulism neurotoxin type E (BoNT/E) have been reported in November and December 2016, four in Germany and two in Spain. All cases are of Russian or Kazakh origin and had consumed dried and salted roach. Fish samples taken from two patients' homes have been confirmed to contain the BoNT/E coding gene. The implicated fish product was distributed to several EU/EEA countries and recalled after 25 November 2016.

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Cluster of hepatitis A with identical genotype IA viral RNA sequence – United Kingdom

Opening date: 12 December 2016 Latest update: 23 December 2016

Since February 2016, 24 cases of hepatitis A infected with two distinct strains of sub-genotype IA have been reported by Ireland, Luxembourg, the Netherlands, Sweden and the United Kingdom (UK). Most cases self-identify as men who have sex with men (MSM), with only a few women affected, including one person who injects drugs (PWID). Eight cases reported having travelled to Spain during the incubation period. Germany, Italy and Spain reported regional increases of hepatitis A in MSM or in adult male populations.

➔Update of the week

On 12 December 2016, the UK reported two MSM cases and one female case with identical sequences in individuals with a travel history to Gran Canaria, Spain. As of 16 December 2016, three additional countries reported recent sporadic cases with identical sequences: Ireland, Luxembourg and Sweden.

Multi-drug resistant tuberculosis in migrants – Multistate (Europe) – 2016

Opening date: 18 November 2016 Latest update: 23 December 2016

An international cluster involving seven cases of multidrug-resistant tuberculosis (MDR-TB) in asylum seekers has been detected in Switzerland between February and August 2016. The countries of origin are Somalia (5), Eritrea (1) and Ethiopia (1). Whole genome sequencing (WGS) showed no difference among isolates in four cases and differences of one allele in the three others. Based on the WGS results, the strains belong to a single molecular cluster. The same genetic clone with the same drug resistance profile was detected in eight additional cases, six of them diagnosed in Germany (6), two in Austria (2) and one in Sweden (1).

➔Update of the week

As of 19 December 2016, Bulgaria, Croatia, Cyprus, Denmark, Estonia, Hungary, Greece, Italy, Latvia, Luxembourg, Malta, Poland, Portugal and Romania are not reporting cases with corresponding MIRU-VNTR 24 loci and/or DST profile belonging to this cluster.

Candida auris in healthcare settings – Europe – 2016

Opening date: 9 December 2016 Latest update: 23 December 2016

Hospital outbreaks caused by *Candida auris* have been reported this year in the United Kingdom and Spain. *C. auris* can cause invasive infections, and most *C. auris* isolates are resistant to fluconazole. Resistance to other antifungal agents has also been reported, and multidrug-resistant *C. auris* isolates with resistance to all three main classes of antifungal drugs have been described. Unlike other *Candida* species, *C. auris* seems to have a high propensity for transmission in healthcare settings, possibly related to environmental contamination.

➔Update of the week

There have been no new outbreaks or isolates reported since the last CDTR.

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

Opening date: 13 October 2016 Latest update: 23 December 2016

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

➔Update of the week

Influenza activity increased across the region with epidemic thresholds for the ILI/ARI rate being exceeded in ten countries.

Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011 Latest update: 23 December 2016

Measles, a highly transmissible vaccine-preventable disease, is still endemic in some EU countries where vaccination uptake remains below the level required to interrupt the transmission cycle. 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 2015, 16 EU/EEA countries were above the measles vaccination coverage target of 95% for the first dose, and six countries for the second dose. Fourteen countries in the EU have coverage rates of less than 95% for the first dose and 20 countries for the second dose.

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➔Update of the week
In the EU/EEA Member States a measles outbreak was reported in the Romania. Outside of the EU, outbreaks were detected in Pakistan and Somalia.

Rubella - Multistate (EU) - Monitoring European outbreaks

Opening date: 7 March 2012 Latest update: 23 December 2016

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

➔Update of the week
No new outbreaks have been detected since June 2015.

Non EU Threats

Increase in travel associated Legionnaires' disease – Dubai, UAE

Opening date: 10 November 2016 Latest update: 23 December 2016

The ECDC ELDSNet surveillance scheme on travel-associated Legionnaires' disease (TALD) has observed an increase in the number of cases associated with travel to Dubai in the past few months. As of 21 December 2016, 26 travel-associated cases of Legionnaires' disease have been reported from seven EU Member States. This is higher than the numbers observed for the same time period in 2015.

➔Update of the week
Over the past week, two additional travel-related cases have been detected.

Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015 Latest update: 23 December 2016

From 1 February to 18 November 2016, Zika virus infection and the related clusters of microcephaly cases and other neurological disorders constituted a public health emergency of international concern (PHEIC). Since 2015, and as of 15 December 2016, 71 countries and territories have reported evidence of mosquito-borne transmission of the virus. According to World Health Organization, as of 14 December, 29 countries or territories have reported microcephaly and other central nervous system malformations in newborns potentially associated with Zika virus infection.

➔Update of the week
USA
In Florida, as of 21 December, two new locally-acquired cases have been reported since the last CDTR.

In Texas, as of 20 December, no new locally-acquired cases have been reported since the last CDTR.

ECDC maps
In ECDC maps of countries and territories with autochthonous vector-borne transmission of Zika virus infection:
- the status of Guyana, Malaysia and Saint Vincent and the Grenadines changed to widespread transmission;
- the status of the Maldives changed to sporadic transmission;
- Sint Eustatius and Saba have been removed from the map;
- Angola has been added to the map as a country with past transmission, taking into account the case exported to France with date of onset in week 37.

Cholera - Multistate (World) - Monitoring global outbreaks

Opening date: 20 April 2006 Latest update: 23 December 2016

Cholera outbreaks are repeatedly being reported from several countries in Africa, Asia and the Americas.

➔Update of the week
This week, cholera outbreaks are being reported in Haiti and Yemen.

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Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 23 December 2016

Global public health efforts are ongoing to eradicate polio, a crippling and potentially fatal disease, by immunising every child until transmission of the virus has completely stopped and the world becomes polio-free. Polio was declared a public health emergency of international concern (PHEIC) by the World Health Organization (WHO) on 5 May 2014 due to concerns regarding the increased circulation and international spread of wild poliovirus during 2014. On 11 November 2016, at the eleventh meeting of the Emergency Committee, the temporary recommendations in relation to the PHEIC were extended for another three months. WHO recently declared wild poliovirus type 2 (WPV2) eradicated worldwide.

➔Update of the week

One new case of wild poliovirus type 1 (WPV1) has been reported in the past week in Badin, Pakistan. Onset of paralysis occurred on 10 October 2016.

Two new environmental samples positive for circulating vaccine-derived poliovirus type 2 (cVDPV2) have been confirmed in the past week in Quetta, Pakistan. Samples were collected on 28 November and 20 October 2016, respectively. No associated cases of paralysis have been detected for this strain.

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II. Detailed reports

Increase in Salmonella Stourbridge cases - Germany

Opening date: 12 December 2016 Latest update: 23 December 2016

Epidemiological summary

Since July 2016, Germany has recorded 14 cases of *S.* Stourbridge (6,8:b:1,6) infections, nine of which were hospitalised and two were fatal. This represents an increase on the one to five cases which occurred per year between 2011 and 2015. Cases were notified in different federal states, no cases had travelled outside of Germany before becoming ill. Six of seven isolates tested have the same PFGE profile, and the seventh isolate has a very similar one, suggesting that the two types are closely related. Germany will perform whole genome sequencing (WGS) on eight isolates and results will be available in the coming weeks.

Germany is the only EU/EEA Member State where there has been a statistically significant increase in the number of cases during 2016. In the EU/EEA, and as of 16 December 2016, there have been 35 cases during 2016, compared to 11 cases in 2014 and 22 cases in 2015. The 35 cases in 2016 have been reported by eight EU Member States: Austria (1), France (14), Germany (14), Ireland (1), Italy (1), Luxembourg (2), the Netherlands (1) and the UK (1). The French public health authorities consider the number of cases in France in 2016 to be within the expected range. The majority of the 2016 cases occurred between April and October. Twelve cases were hospitalised: nine in Germany, one in Austria, one in Luxembourg and one in the United Kingdom.

ECDC assessment

Considering that *S.* Stourbridge is a rare serotype, it cannot be excluded that some of the cases observed in other countries may have been exposed to a common vehicle/source of infection, potentially originating from or occurring in Germany. Given the reporting delay, it is possible that additional cases may have occurred during November and December. In addition, as long as the vehicle/source of infection remains unidentified, new cases may occur. The high proportion of hospitalised cases and the two deaths in Germany highlight the severity of the disease caused by this particular strain and the need to rapidly find the vehicle/source of infection. WGS data are available from four countries and expected soon from a fifth country, which should enable the assessment of the multi-country dimension of this event.

Actions

ECDC published a rapid risk assessment on 20 December 2016. ECDC encourages the sharing, joint analysis and interpretation of PFGE and WGS data together with involved Member State experts. In addition, public health authorities may consider contacting their national food safety and veterinary authorities to investigate whether non-human isolates of *S.* Stourbridge have been identified this year. As a complement to WGS and PFGE typing, ECDC is prepared to facilitate inter-country investigations (e.g. using shared, common trawling questionnaire for prospective cases in other countries.)

Type E botulism likely associated with fish consumption – Germany and Spain

Opening date: 29 November 2016 Latest update: 23 December 2016

Epidemiological summary

On 22 November 2016, Germany reported two laboratory-confirmed cases of foodborne botulism neurotoxin type E (BoNT/E) in adult males from two neighbouring federal states. Both patients are of Russian origin and had consumed 'dried and salted roach (*Rutilus rutilus*)' purchased in separate locations of the same chain of grocery stores specialising in eastern European foods. Both developed symptoms in early November. The implicated fish product has been distributed within Germany and to several other EU/EEA Member States. Germany issued an RASFF notification (2016.1621) on 25 November 2016, leading to recalls in the countries concerned. Two fish samples taken from one patient's home have been confirmed to contain the BoNT/E coding gene.

On 25 November 2016, Spain reported two suspected cases of botulism. These cases were a couple of Russian nationality with residence in Spain. Both had consumed 'Plötze Salz (*Rutilus rutilus*)' and developed symptoms on 5 and 6 December 2016. The results of the clinical samples were negative and the two cases were classified as probable.

On 7 December 2016, Germany reported an additional suspected case of botulism from a third federal state. The patient

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developed symptoms on 24 November 2016. This patient is also of Russian origin and had also consumed 'dried and salted roach (*Rutilus rutilus*)' purchased from the same distributor and the same supermarket chain as the two previous cases in Germany. The case was later confirmed.

On 19 December 2016, German authorities reported an additional confirmed case. The case is a 55 year-old woman of Kazakh origin. She had consumed dried roach on 10 or 11 December 2016. The fish was purchased in a store belonging to the previously implicated chain of stores on 12 November 2016, more than a week before the recall of the roach. The woman fell ill on 11 December 2016. The *C. botulinum* type E toxin gene was identified by PCR in the patient's stool and also in the leftovers of the fish. The patient's husband ate some of the fish, presented with a positive stool sample but remained healthy. Apparently, the family had not received information about the recall of the fish.

The Netherlands reported one BoNT/E case in April 2016, suspected to have been infected via home-preserved salmon. However, this case is not related to the current outbreak. Albania, Austria, Denmark, France, Italy, Lithuania, Luxembourg and Slovenia have not reported BoNT/E cases in 2016.

Sources: ECDC botulism page | RASFF | Media

ECDC assessment

The clustering in time and very likely link to the consumption of commercially available dried and salted roach (*Rutilus rutilus*) indicates that this fish product may be a common source. Five human cases have a Russian background and one case has a Kazakh background. The implicated fish product has been distributed to several EU/EEA Member States and intensive recall measures have been initiated in the countries concerned following the German RASFF notification (2016.1621) on 25 November 2016.

Botulism neurotoxin type E is not an uncommon contamination in fish products, which have been poorly eviscerated and/or self-salted at home. Contamination in commercial fish products has also been reported. For this outbreak, the populations at the greatest risk are those who traditionally consume salted and dried roach ('vobla'). The risk to other population groups is very low in EU/EEA. In view of the rapid initiation of recalls and targeted public warnings, the risk that new cases linked to the outbreak will appear in the EU/EEA is considered to be very low. The main residual risk of exposure relates to consumers still keeping the product at home who may not been made aware of the public warnings, or stores that may not have received notification of the recall and are continuing to sell the implicated fish product. There is no risk of person-to-person transmission.

Actions

ECDC is following this event through the Epidemic Intelligence Information System for Food and Waterborne Diseases (EPIS-FWD). ECDC and the European Food Safety Authority (EFSA) distributed a joint rapid outbreak assessment on 20 December 2016.

Cluster of hepatitis A with identical genotype IA viral RNA sequence – United Kingdom

Opening date: 12 December 2016 Latest update: 23 December 2016

Epidemiological summary

Event 1:
On 6 December 2016, the UK reported 15 cases of hepatitis A with an identical viral RNA sequence of genotype IA. The cases were geographically grouped in three clusters in England and one case in Northern Ireland. All cases were males, aged between 23 and 63 years, with most (12/15) identifying themselves as MSM. Five cases travelled to Spain and had symptom onset between July and November. Since the initial report, the UK recorded an additional case of hepatitis A with the same sequence in an individual returning from Spain, self-identifying as MSM.

The strain involved is phylogenetically related to isolates from Central and South America.

As of 16 December, three additional countries reported recent sporadic cases with identical sequence:
- Ireland reported one female case with onset in early October 2016 and travel history to Madrid, Spain.
- Luxembourg reported one female case in a person who injects drugs with HIV and HCV co-infections; no travel information is available.
- Sweden reported one female case with onset in February 2016 and travel history to Tenerife, Spain.

Austria, Denmark, Finland, Georgia and the Netherlands have not identified recent cases with this sequence.

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Germany, Italy and Spain reported regional increases of hepatitis A among MSM or among the adult male population during the second half of 2016. Epidemiological and microbiological investigations are ongoing.

Event 2:
On 14 October 2016, the Netherlands notified two cases of hepatitis A in MSM that participated in 'Europride' in Amsterdam from 23 July to 7 August 2016.

The cases were infected with an indistinguishable IA genotype sequence, but different from the event 1. The two individuals visited the same location on 2 and 3 August 2016 during 'Europride', where they engaged in anonymous sexual activities. They developed symptoms on 11 and 15 September 2016, respectively. The clustering in time and place of the cases, along with an identical sequence suggest person-to-person transmission through sexual route, but food- or water-borne transmission cannot be excluded.

The strain involved is phylogenetically related to isolates from Cambodia and Thailand.

On 12 December 2016, the UK reported two MSM cases and one female case with identical sequences in individuals with travel history to Gran Canaria, Spain.

Background information from The European Surveillance System (TESSy):
During the period 2011-2015, between 7 200 and 13 500 confirmed cases of hepatitis A were reported to TESSy by 30 EU/EEA countries. Romania and Bulgaria accounted for 34% and 21% of the cases, respectively. Cases were reported in all age groups, with most cases occurring among 25-44 year-olds (32%) and 45-64 year-olds (31%). Cases were also common among children aged 5-14 years. Male cases were more frequent than female, particularly in the age groups 15-24 and 25-44 years (56% and 58%, respectively). The majority (89%) of infections were domestically-acquired. Among travel-associated cases, Egypt, Morocco and Turkey were the most common travel destinations.

ECDC assessment

The sequences from events 1 and 2 are 94.9% similar, suggesting independent events. No infected food handlers have been implicated in these events. Female cases may have been infected by ingesting contaminated food or water, or through sexual transmission. One female case is a PWID, highlighting the risk for people who inject drugs.

On the basis of current evidence, the European population groups most at risk of being affected are MSM possibly participating in higher-risk sexual practices, and their contacts. Mass gathering events related to this specific population group may increase transmission opportunities.

Person-to-person sexual transmission is the most likely hypothesis for the spread of this outbreak, as a food-borne transmission would result in more cases affecting the general population.

Actions

ECDC is monitoring this event through EPIS-FWD and EPIS-STI. ECDC published a rapid risk assessment on 20 December 2016.

Multi-drug resistant tuberculosis in migrants – Multistate (Europe) – 2016

Opening date: 18 November 2016 Latest update: 23 December 2016

Epidemiological summary

Seven cases of multidrug-resistant tuberculosis (MDR-TB) were diagnosed in Switzerland between February and August 2016 in males aged 15–19 years old from Somalia (5), Eritrea (1) and Ethiopia (1) who had sought asylum at different points in time between December 2015 and June 2016.

Sputum smear microscopy was positive in three patients, negative in one, and not performed or unknown in three. One of the cases was diagnosed four months after a contact with another of the cases with negative sputum smear microscopy. No other epidemiological link has been identified so far. Whole genome sequencing (WGS) of these cases showed identical isolates in four cases and differences of one allele in the other three. Based on WGS analysis, the seven strains are genetically highly related and are likely to be part of a single molecular cluster.

The Swiss National Reference Laboratory for Mycobacteria requested information from laboratories in Austria, France, Germany,

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Italy, the Netherlands and the United Kingdom (UK). As of 19 December 2016, six cases in Germany (6) are of the same genetic clone. The patients are asylum seekers originating from Somalia. Two cases of MDR-TB with the same resistance profile have been detected in Austria (2), one with the same drug susceptibility pattern; for the second case, drug susceptibility testing (DST) is ongoing.

ECDC requested information from all EU/EEA Member States on whether they have identified cases with an MDR TB strain showing the same MIRU-VNTR 24 loci pattern. The pattern could not be identified in Bulgaria, Croatia, Cyprus, Denmark, Estonia, Hungary, Greece, Italy, Latvia, Luxembourg, Malta, Poland, Portugal and Romania.

Of the responding countries, two countries reported a total of three cases from the Horn of Africa with the same MIRU-VNTR pattern and drug susceptibility pattern. In addition, eight cases from Somalia with similar MIRU-VNTR results and various antimicrobial susceptibility patterns have been reported from four countries. The dates of isolation of these strains range from 2009 to 2014, or are unknown.

ECDC assessment

According to the latest WHO TB report, the incidence of TB in Somalia was around 274 per 100 000 in 2015; MDR-TB was found in 8.7% of new TB cases and in 47.0% of previously-treated TB cases in Somalia. According to IOM, 2.1% of the refugees in Europe (i.e. about 10 000 people) are from Somalia.

Further multi-country outbreak investigations are focussing on identifying exposure risk factors including the travel itinerary and history of possible contacts among patients in this single-strain outbreak of MDR TB. Although the limited number of cases detected so far suggests a limited risk of this becoming a widespread event, more cases may be expected in association with this cluster. Sharing WGS-based typing information between affected countries on outbreak-related cases is important to further delineate the extent of the outbreak.

Actions

ECDC published an updated rapid risk assessment on its website on 19 December 2016.

Candida auris in healthcare settings – Europe – 2016

Opening date: 9 December 2016 Latest update: 23 December 2016

Epidemiological summary

An outbreak of *C. auris* infection at a cardio-thoracic surgery centre in the United Kingdom was reported in October 2016. Over a 16-month period from April 2015 to July 2016, 50 cases of *C. auris* infection occurred in this centre. Twenty-two (44%) of these cases required antifungal treatment, nine (18%) of which had a bloodstream infection (candidemia).

Another outbreak of *C. auris* bloodstream infections occurred in 2016 in the surgical intensive care unit of a hospital in Spain. Between April and November 2016, 33 cases of *C. auris* bloodstream infection were detected in this unit. Following the implementation of control measures, the incidence of the infections decreased.

Isolated C. auris cases have also been detected in Germany and Norway.

ECDC assessment

C. auris poses a risk for patients in healthcare facilities in Europe due to its propensity to cause outbreaks and its antifungal resistance. Difficulties with laboratory identification and lack of awareness of this new *Candida* species might result in transmission and outbreaks remaining unnoticed. There is a need to raise awareness in European healthcare facilities to adapt testing strategies in laboratories and implement enhanced control measures early enough to prevent further hospital outbreaks.

Actions

ECDC published a rapid risk assessment on 20 December.

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

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Opening date: 13 October 2016 Latest update: 23 December 2016

Epidemiological summary

Week 50/2016 (12–18 December 2016)
The proportion of virus detections among sentinel surveillance specimens increased to 38%.
The great majority of influenza viruses detected this week were A(H3N2).
Laboratory-confirmed influenza cases from hospital settings increased in some countries.

Season overview
Sentinel specimen positivity reached 10% in week 46/2016, an indication of a slightly earlier start of the influenza season compared to previous seasons.
Week 46/2016 was the earliest week in a season that the positivity rate reached 10% since the emergence of A(H1N1)pdm09 viruses in the 2009-2010 influenza season; during the last six seasons this occurred between weeks 48 and 51.
Since week 40/2016, influenza A viruses have predominated; the great majority (99%) of subtyped influenza A viruses from sentinel sites have been A(H3N2).

ECDC assessment

Influenza activity increased across the region with epidemic thresholds for the ILI/ARI rate being exceeded in ten countries. It is possible that the season will peak during the holiday season in many countries, which will increase pressure on healthcare systems.

Actions

ECDC monitors influenza activity in Europe during the winter season and publishes its weekly report on the Flu News Europe website. Risk assessments for the season are available from the European Centre for Disease Prevention and Control (ECDC) and the WHO Regional Office for Europe websites.

Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011 Latest update: 23 December 2016

Epidemiological summary

EU/EEA Member States

Romania – update
As of 16 December 2016, 1 725 cases of measles have been reported since the beginning of 2016. This is an increase of 417 cases since the last update on 18 November 2016. These cases are either laboratory confirmed, or had an epidemiological link to a laboratory-confirmed case. The highest notification rates are in infants and young children. Seven deaths have been notified in 2016. Thirty-two of 42 districts have reported cases, with Arad being the most affected (454 cases) district. Vaccination activities are ongoing in order to cover communities with suboptimal vaccination coverage. As of 9 December 2016, 3 414 children have been vaccinated.

Rest of the world

Pakistan
This year, around 9 000 suspected measles cases were reported in Khyber Pakhtunkhwa, a province located in the north western region of Pakistan. The most affected district was Peshawar with around 2 600 measles cases. Similarly, in Charsadda district around 1 000 cases, in DI Khan 700 cases, in Nowshera 400 cases, and in Swat 450 measles cases were reported, as well as in other districts.

Somalia
A recent outbreak of measles in Kismayo, Somalia has been reported. Since September 2016 and as of 13 December 2016, 419 measles cases have been officially recorded, 302 of which were in children under five years. UNICEF and its partners have initiated a mass measles vaccination, aiming to vaccinate 54 000 children under 10 years of age in Kismayo, southern Somalia.

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Web sources: ECDC measles and rubella monitoring | ECDC/Euronews documentary |MedISys Measles page | EUVAC-net ECDC | ECDC measles factsheet | NPHI Romania | Media | UNICEF

ECDC assessment

Although progress has been made towards elimination in the EU, it has not yet been achieved, as exemplified by the worrying situation currently reported in Romania. According to the results of the 5th Regional Verification Commission meeting for the elimination of measles and rubella in Europe, held 24-26 October 2016, 24 countries in the region have been judged to have eliminated measles.

Web source: WHO-EU

Actions

ECDC monitors measles transmission and outbreaks in the EU and neighbouring countries through enhanced surveillance and epidemic intelligence activities.

Rubella - Multistate (EU) - Monitoring European outbreaks

Opening date: 7 March 2012 Latest update: 23 December 2016

Epidemiological summary

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

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 | European Regional Verification Commission for Measles and Rubella Elimination (RVC) (2016)

ECDC assessment

The World Health Organization (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 of the WHO European Region. Although progress has been made towards elimination, this goal has not yet been achieved. The 5th Regional Verification Commission meeting was held 24-26 October 2016. According to the results, 24 countries in the WHO EURO region have been judged to have eliminated rubella.

Web source: WHO-EU

Actions

ECDC closely monitors rubella transmission in Europe by analysing the cases reported to The European Surveillance System and through its epidemic intelligence activities. Twenty-four EU and two EEA countries contribute to the enhanced rubella surveillance. The purpose of the enhanced rubella surveillance is to provide regular and timely updates on the rubella situation in Europe in support of effective disease control, increased public awareness, and achieving the target of rubella and congenital rubella elimination.

Increase in travel associated Legionnaires' disease – Dubai, UAE

Opening date: 10 November 2016 Latest update: 23 December 2016

Epidemiological summary

The ECDC ELDSNet surveillance scheme on travel-associated Legionnaires' disease (TALD) has observed an increase in the number of cases associated with travel to Dubai in recent months: 26 cases, compared to ten cases in 2014 and 11 in 2015. As of 21 December 2016, there are 26 cases reported from seven countries: Belgium (1), Denmark (2), France (3), Germany (1), the Netherlands (4), the UK (12), and Sweden (3). These are TALD cases with a travel history involving a stay in Dubai, United Arab Emirates, reported with illness onset October-December 2016.

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ECDC assessment

There is a significant increase in legionellosis cases reported by EU travellers to Dubai. This increase may reflect an increase of travel taking place to Dubai. The scattering of cases at different accommodation venues and locations in Dubai suggests the possibility of a persistent community source.

Actions

ECDC is in contact with EU Member States reporting cases and the ELDSNet network, WHO and United Arab Emirates IHR FP for information sharing and assessment.
ECDC has prepared a RRA and an investigation questionnaire that has been shared with EU Member States. One ECDC expert and one Member State expert will participate in a WHO assessment mission to Dubai, departing on 26 December 2016.

Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015 Latest update: 23 December 2016

Epidemiological summary

1. Update on the public health emergency of international concern
The fifth meeting of the Emergency Committee (EC) convened by the Director-General under the International Health Regulations (IHR) regarding Zika virus infection, microcephaly and other neurological disorders was held on 18 November 2016. The EC originally recommended a PHEIC on 1 February 2016 on the basis of an extraordinary cluster of microcephaly and other neurological disorders reported in Brazil, following a similar cluster in French Polynesia and geographical and temporal association with Zika virus infection which required urgent and coordinated and research.

Because research has now demonstrated the link between Zika virus infection and microcephaly, the EC felt that a robust longer-term technical mechanism was now required to manage the global response and research agenda. Although Zika virus infection and its associated consequences remain a significant enduring public health challenge requiring intense action, it no longer represents a PHEIC as defined under the IHR. The EC recommended that a sustained programme of work with dedicated resources should be implemented to address the long-term nature of the disease and its associated consequences. Based on this advice, the Director-General declared the end of the PHEIC.

2. Update on number of cases
Worldwide
Since 2015 and as of 15 December 2016, 71 countries and territories have reported evidence of mosquito-borne transmission of the virus. Since February 2016 and as of 14 December 2016, 13 countries or territories have reported evidence of person-to-person transmission of the virus, probably via sexual transmission.

USA
Since the last CDTR and as of 21 December 2016, two new locally-acquired cases have been reported in Florida. As of 21 December 2016, 253 locally-acquired and 1 002 travel-related cases have been reported in Florida.

Since the last CDTR and as of 20 December 2016, no new locally-acquired cases have been reported in Texas. As of 20 December 2016, five locally-acquired and 278 travel-related cases have been reported in Texas.

EU/EEA imported cases
Since June 2015 (week 26) and as of 23 December 2016, 21 countries (Austria, Belgium, Czech Republic, Denmark, Finland, France, Greece, Hungary, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom) have reported 2 045 travel-associated Zika virus infections through The European Surveillance System (TESSy). Over the same time period, nine EU/EEA Member States have reported 100 Zika cases among pregnant women.

3. Update on microcephaly and/or central nervous system malformations potentially associated with Zika virus infection
As of 14 December 2016, 29 countries or territories have reported microcephaly and other central nervous system malformations in newborns potentially associated with Zika virus infection. Brazil reports the highest number of cases. As of 14 December 2016, 20 countries or territories have reported Guillain-Barré syndrome potentially associated with Zika virus infection.

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Web sources: ECDC Zika Factsheet | PAHO | Colombian MoH | Brazilian MoH | Brazilian microcephaly case definition | SAGE MOH Brazil | Florida Health department

ECDC assessment

The spread of the Zika virus in the Americas and Asia is likely to continue as the vectors (*Aedes aegypti* and *Aedes albopictus* mosquitoes) are widely distributed there. The likelihood of travel-related cases in the EU is increasing. A detailed risk assessment was published on 28 October 2016. As neither treatment nor vaccines are available, prevention is based on personal protection measures. Pregnant women should consider postponing non-essential travel to Zika-affected areas.

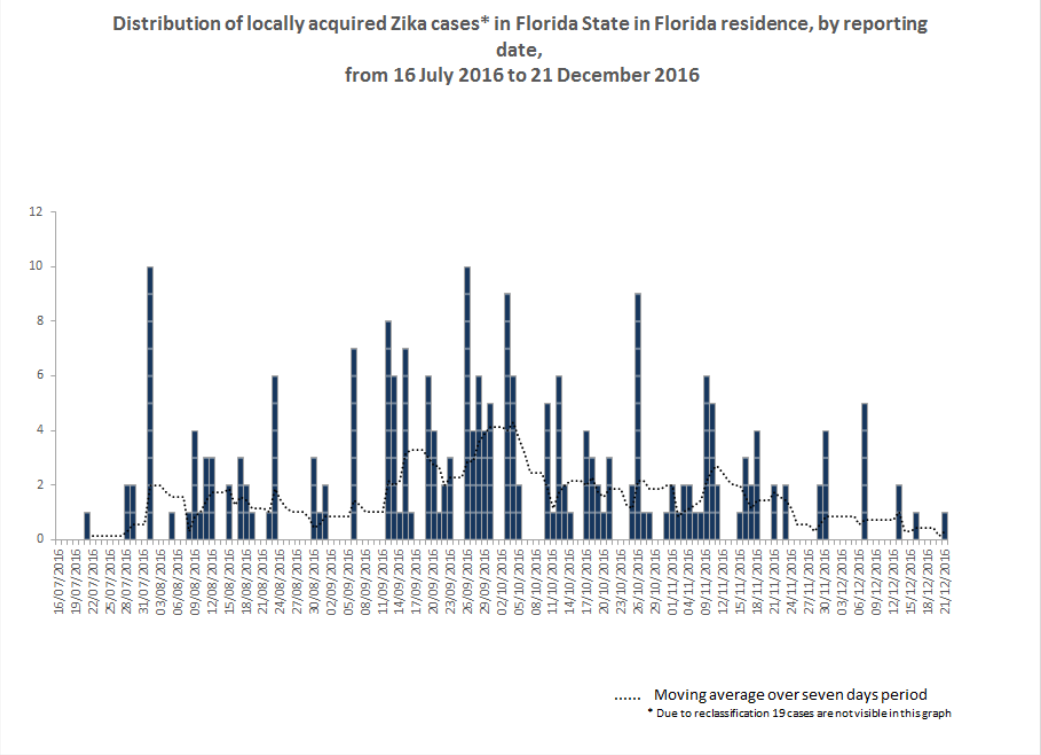
Actions

ECDC publishes an epidemiological update every Friday together with maps containing information on countries or territories which have reported confirmed autochthonous cases of Zika virus infection. A Zika virus infection atlas is also available on the ECDC website.

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

Distribution of locally-acquired Zika cases in Florida State (US), by reporting date, from 16 July 2016 to 21 December 2016

ECDC (Adapted from Florida health department and media)



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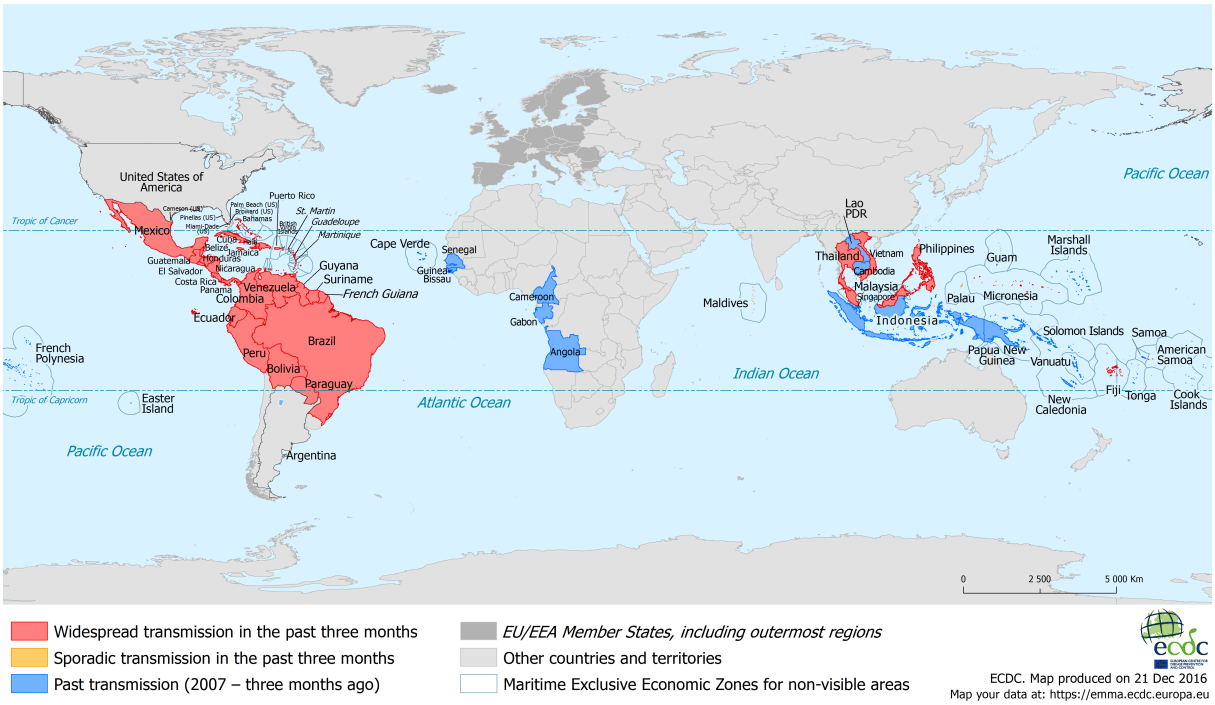
Countries or territories with reported confirmed autochthonous cases of Zika virus infection in the past three months, as of 22 December 2016

ECDC



Cholera - Multistate (World) - Monitoring global outbreaks

Opening date: 20 April 2006 Latest update: 23 December 2016

Epidemiological summary

In Haiti, as of 7 December 2016, WHO/PAHO has reported approximately 9 600 suspected cholera cases since Hurricane Matthew. However, the weekly number of new cases has been decreasing since mid-November.

In Yemen, as of 13 December 2016, 10 148 cholera suspected cases, including 92 deaths had been reported. Of these cases, 1 173 had been reported since 6 December 2016. The number of laboratory-confirmed cases of *Vibrio cholerae* 01 has risen to 156.

In DRC, according to the cholera platform, the number of cholera cases reported weekly is increasing in Congo Central, South Kivu, Tanganyika and Katanga.

Source: Cholera platform | Haitian MoH | media

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ECDC assessment

European travellers should seek information on how to prevent cholera contamination prior to visiting affected areas.

Actions

ECDC continues to monitor cholera outbreaks globally through its epidemic intelligence activities to identify significant changes in epidemiology and will report on a monthly basis.

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 23 December 2016

Epidemiological summary

As of 20 December 2016, 35 cases of WPV1 have been reported to WHO in 2016, compared with 70 for the same period in 2015. The cases were detected in Pakistan (19), Afghanistan (12) and Nigeria (4). Three cases of cVDPV have been reported in 2016, compared with 24 for the same period in 2015. The three cases were all detected in Laos.

Web sources: Polio eradication: weekly update | ECDC Poliomyelitis factsheet | Temporary Recommendations to Reduce International Spread of Poliovirus | WHO Statement on the Seventh Meeting of the International Health Regulations Emergency Committee on Polio

ECDC assessment

Continued detection of positive environmental samples throughout 2016 in Pakistan confirms that virus transmission remains geographically widespread across the country, despite strong improvements in response measures. The last locally-acquired wild polio cases within the current EU borders were reported from Bulgaria in 2001. The most recent wild polio outbreak in the WHO European Region was in Tajikistan in 2010, when importation of WPV1 from Pakistan resulted in 460 cases.

References: ECDC latest RRA | Rapid Risk Assessment on suspected polio cases in Syria and the risk to the EU/EEA | Wild-type poliovirus 1 transmission in Israel - what is the risk to the EU/EEA? |RRA Outbreak of circulating vaccine-derived poliovirus type 1 (cVDPV1) in Ukraine

Actions

ECDC monitors reports of polio cases worldwide through epidemic intelligence in order to highlight polio eradication efforts and identify events that increase the risk of wild poliovirus being reintroduced to the EU. Following the declaration of polio as a PHEIC, ECDC updated its risk assessment. ECDC has also prepared a background document with travel recommendations for the EU.

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

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