COMMUNICABLE DISEASE THREATS REPORT

CDTR
Week 1, 3-9 January 2016

All users

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: 7 January 2016

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

➔Update of the week

In week 53, influenza activity remained low in most countries in the WHO European Region.

Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011 Latest update: 7 January 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 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 since the last monthly update.

Rubella - Multistate (EU) - Monitoring European outbreaks

Opening date: 7 March 2012 Latest update: 7 January 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. 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.

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Non EU Threats

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

Opening date: 24 September 2012 Latest update: 7 January 2016

Since April 2012 and as of 7 January 2016, 1 645 cases of MERS, including 638 deaths, have been reported by health authorities worldwide. The source of the virus remains unknown, but the pattern of transmission and virological studies point towards dromedary camels in the Middle East as being a reservoir from which humans sporadically become infected through zoonotic transmission. Human-to-human transmission is amplified among household contacts and in healthcare settings.

➔Update of the week

Oman reported a new case of MERS-CoV on 4 January 2016 making it the seventh case reported in the country. The previous case was detected in May 2015.

Public health risks - Multistate - Refugee movements

Opening date: 4 November 2015 Latest update: 18 December 2015

Europe is experiencing its largest influx of refugees since the Second World War. According to the UN Refugee Agency (UNHCR), more than 944 000 refugees have arrived in Europe in 2015. To date, there have been reports of cases of louse-borne relapsing fever, cutaneous diphtheria, scabies, measles, meningococcal meningitis, shigellosis, typhoid fever, hepatitis A, tuberculosis and malaria among refugees. While these cases do not represent a significant disease burden for the host countries, the diseases pose a potential threat, particularly to the health of the refugees themselves. The health conditions of the refugees may worsen with the wintery weather due to low temperatures and overcrowding in shelters.

➔Update of the week

No outbreaks involving refugees were reported during the past week.

Ebola Virus Disease Epidemic - West Africa - 2014 - 2015

Opening date: 22 March 2014 Latest update: 31 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 3 January 2016, WHO had reported 28 637 cases of Ebola virus disease related to the outbreak in West Africa, including 11 315 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 and Guinea on 29 December 2015. Liberia will be declared Ebola-free on 14 January if no new cases are detected. 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 underlined by the recent re-emergence of cases in previously Ebola-free countries.

➔Update of the week

According to a WHO situation report of 6 January 2016, there were no confirmed cases of Ebola virus disease (EVD) reported in the week to 3 January. On 29 December, when WHO declared that human-to-human transmission of Ebola virus had ended in Guinea, Guinea entered a 90-day period of heightened surveillance. Sierra Leone's 90 days of enhanced surveillance is scheduled to conclude on 5 February 2016. If no further cases are reported, Liberia will be declared to have ended human-to-human transmission on 14 January 2016, 42 days after the two most recent cases received a second consecutive negative test for Ebola virus.

According to an article in *the New England Journal of Medicine* (NEJM), a trial of convalescent plasma at a treatment centre in Guinea did not find a significant survival benefit. No adverse reactions were seen in the patients who were treated with convalescent plasma.

Another study, also published in *NEJM*, showed that patients at a Liberian treatment unit who were prescribed a second line antimalarial combination therapy with artesunate–amodiaquine had a lower risk of death from EVD than did patients who were prescribed first line therapy with artemether–lumefantrine. The team concluded that the lower death rate in the alternative-combo group is biologically plausible, based on in vitro studies, but they said they could not rule out the possibility that the first-line therapy combination increases the risk of death.

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Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013 Latest update: 7 January 2016

In March 2013, a novel avian influenza A(H7N9) virus was detected in patients in China. Since then and up to 7 January 2016, 683 cases have been reported to WHO, including 275 deaths. No autochthonous cases have been reported outside China. Most cases are isolated and sporadic zoonotic transmission from poultry to humans is the most likely explanation for the outbreak.

➔Update of the week

During the past week, no new cases have been reported by WHO. However, two new confirmed cases have been reported in China, one in Guangdong province and one in Zhejiang province. These cases have not yet been acknowledged by WHO and are not included in the total figures.

Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015 Latest update: 31 December 2015

Zika virus infections are spreading in previously unaffected areas of the world. Since the beginning of 2015, autochthonous Zika cases have been reported in the Pacific region. Autochthonous transmission of Zika virus has been reported in Brazil since April 2015. Since then, Zika virus infections have spread to 12 countries in the Americas. Autochthonous cases have also been reported from Cape Verde recently. Possible links between Zika virus 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 Zika virus outbreak in the north-eastern states. French Polynesia reported an increase in cases of central nervous system malformations during 2014–2015 following the Zika virus infection outbreak from September 2013 to March 2014. Investigations of an association with Zika virus infection and Guillain–Barré syndrome (GBS) are ongoing in Brazil and French Polynesia.

➔Update of the week

No autochthonous cases of Zika virus infection have been reported in EU/EEA Member States in 2015 and 2016 with the exception of two French overseas territories: Martinique and French Guiana. Haiti has not reported autochthonous cases of zika virus infection. However, Germany reported in ProMed a serologically confirmed Zika virus infection in a patient who returned after seven months in Port-au-Prince, where she became ill on 16 December 2015 with fever and joint pain. As of 2 January 2016, 3 174 suspected cases of microcephaly have been notified in Brazil including 38 deaths, affecting 684 municipalities in 21 states. This is an increase by 199 since the last week.

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 7 January 2016

Global public health efforts are ongoing to eradicate polio, a crippling and potentially fatal disease, by immunising every child until transmission of the virus has completely stopped and the world becomes polio-free. Polio was declared a Public Health Emergency of International Concern (PHEIC) on 5 May 2014 due to concerns regarding the increased circulation and international spread of wild poliovirus during 2014. On 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

In the past week, no new cases of wild poliovirus type 1 (WPV1) or circulating vaccine-derived poliovirus (cVDPV) were reported to WHO.

According to WHO, in 2015 there were less cases in fewer places than ever before. It is more important than ever that the momentum gained thus far is maintained in 2016. In order to stop wild poliovirus in 2016, the programme's focus is now on strengthening surveillance, keeping Africa polio-free and ending transmission in Afghanistan and Pakistan.

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II. Detailed reports

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

Opening date: 2 October 2015 Latest update: 7 January 2016

Epidemiological summary

The proportion of influenza virus-positive sentinel surveillance specimens continued to increase from 18% for week 52/2015 to 30% for week 53/2015. However, the majority of specimens were from two countries. Detections of A(H1N1)pdm09, A(H3N2) and type B influenza viruses among sentinel surveillance specimens were reported by 17 countries.

ECDC assessment

The proportion of influenza virus-positive sentinel surveillance specimens has been over 10% for three consecutive weeks, indicating the start of the influenza season in week 51/2015 in the northern and southern part of the European Region. The increase since week 49/2015 in virus detections among sentinel and non-sentinel patients with respiratory disease is due largely to A(H1N1)pdm09 viruses, the subtype representing 80% of subtyped type A viruses. Most influenza type B viruses were without lineage determination. This is in contrast to the 2014–2015 influenza season when by week 1/2015, 81% of influenza A-subtyped viruses were A(H3N2). While A(H3N2) is known to cause severe disease and deaths in the elderly, A(H1N1)pdm09 is more likely to cause severe disease in younger, otherwise healthy, adults.

Viruses characterised so far this season are genetically similar to the strains recommended for inclusion in this winter's trivalent or quadrivalent vaccines for the northern hemisphere.

Actions

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

Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011 Latest update: 7 January 2016

Epidemiological summary

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

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

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were declared to have interrupted measles transmission, five of which were classified as at risk of the re-establishment 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.

Rubella - Multistate (EU) - Monitoring European outbreaks

Opening date: 7 March 2012 Latest update: 7 January 2016

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 re-establishment. 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.

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

Opening date: 24 September 2012 Latest update: 7 January 2016

Epidemiological summary

As of 7 January 2016, 1 645 cases of MERS, including 638 deaths, had 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

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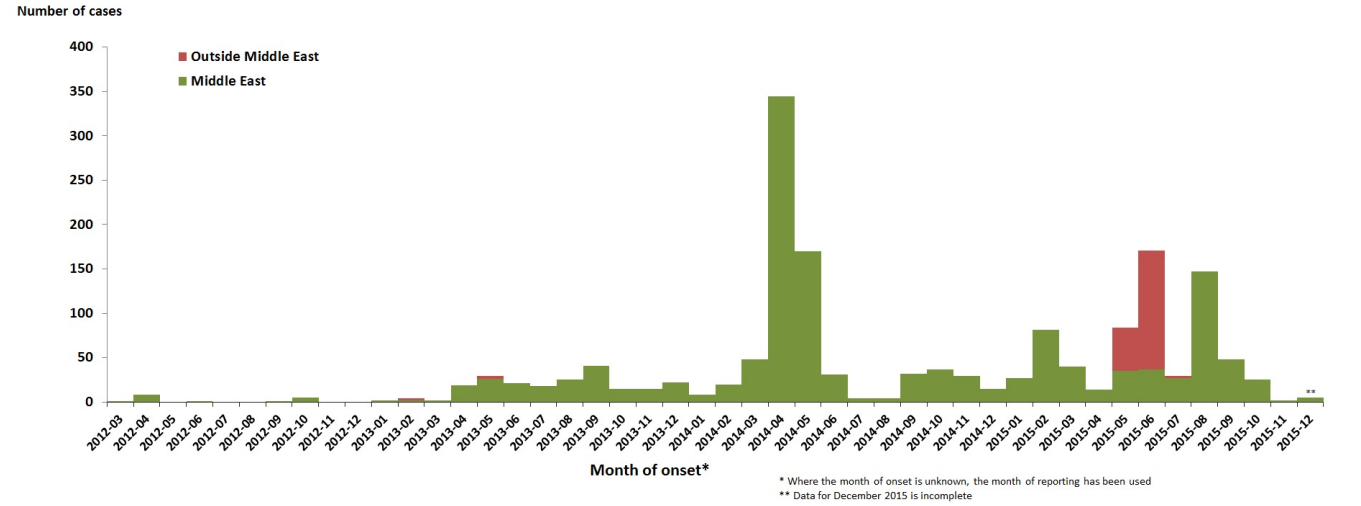
The MERS outbreak in the Middle East poses a low risk to the EU. Efforts to contain the nosocomial clusters in the affected countries are vital to prevent wider transmission. Although sustained human-to-human community transmission is unlikely, the residential cluster of cases reported from Saudi Arabia 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 its MERS CoV rapid risk assessment on 21 October 2015.

Distribution of confirmed cases of MERS-CoV by first available date and place of probable infection, March 2012 – 31 December 2015 (n=1 644)



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Cases of MERS-CoV by country of reporting, March 2012 – 7 January (n=1 645)

Region	Country	Number of cases	Number of deaths
Middle East	Saudi Arabia	1283	551
	United Arab Emirates	81	11
	Qatar	13	5
	Jordan	35	14
	Oman	7	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	**1645**	**638**

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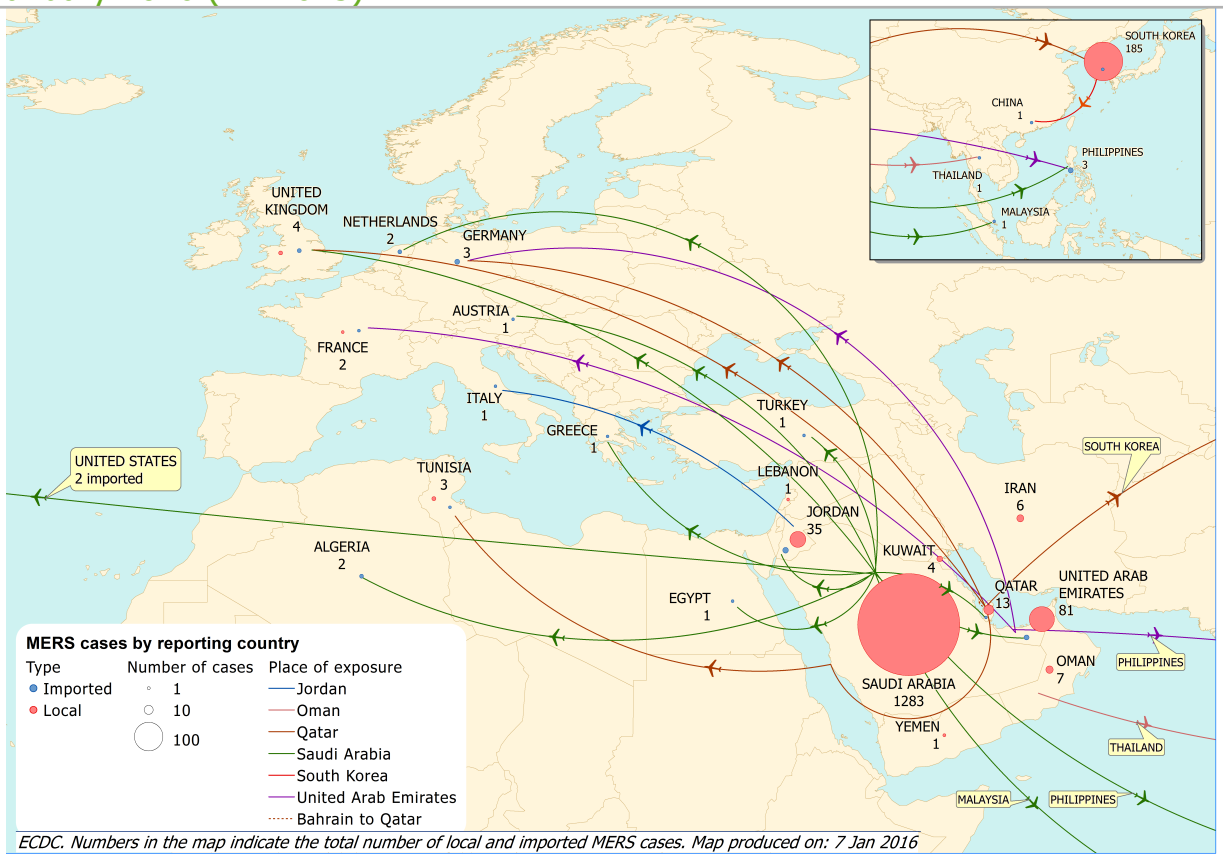
Distribution of confirmed cases of MERS-CoV by place of probable infection, March 2012 – 7 January 2016 (n=1 645)



ECDC. Numbers in the map indicate the total number of local and imported MERS cases. Map produced on: 7 Jan 2016

Public health risks - Multistate - Refugee movements

Opening date: 4 November 2015 Latest update: 18 December 2015

Epidemiological summary

Recent weeks have seen reports of emerging episodes of communicable diseases affecting the refugee population including louse-borne relapsing fever, cutaneous diphtheria, scabies, measles, meningococcal meningitis, shigellosis, typhoid fever, hepatitis A, tuberculosis and malaria.

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 that refugees arriving in Europe contract communicable diseases has increased because of the current overcrowding at reception facilities.
While the risk of mosquito-borne diseases has been reduced as a result of the winter, the risk of infection from diseases whose spread is facilitated by overcrowding and lower temperatures has increased. It is therefore expected that the incidence of respiratory and gastrointestinal conditions will increase in the coming months.

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Low vaccination coverage for some diseases, along with low immunity for some diseases, may result in susceptible refugees developing diseases such as measles and chicken pox, given their high incidence in some regions of the EU.
WHO, UNHCR and UNICEF jointly recommend that refugees, asylum seekers and migrants should have non-discriminatory, equitable access to healthcare services, including vaccines, irrespective of their legal status. They should be provided with timely immunisation against vaccine-preventable diseases, particularly measles and polio. All countries should have effective disease surveillance and reporting systems, outbreak investigation ability and case management and response capacity.
The risk to European residents of being affected by outbreaks occurring among refugee populations remains extremely low because overcrowding, limited access to clean water and low hygiene levels are only encountered in certain reception facilities for refugees.

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.

Ebola Virus Disease Epidemic - West Africa - 2014 - 2015

Opening date: 22 March 2014 Latest update: 31 December 2015

Epidemiological summary

Distribution of cases as of 3 January 2016:

- **Liberia:** 10 675 cases, including 4 809 deaths. Liberia was declared EVD-free on 3 September 2015. However, a family cluster occurred in the week leading up to 22 November 2015.
- **Sierra Leone**: 14 122 cases, including 3 955 deaths. The country was declared Ebola-free on 7 November 2015.
- **Guinea**: 3 805 cases including 2 536 deaths. Guinea was declared EVD-free on 29 December 2015.

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

Situation among healthcare workers
Outside of the three most affected countries, with repatriated cases included, there have been eight cases in Mali, 20 in Nigeria, three in Spain (including two repatriated cases), three in the UK (including two repatriated cases), one in Senegal (infected in Guinea), one in Norway (repatriated), two in France (repatriated), one in the Netherlands (repatriated), one in Switzerland (repatriated), 11 in the USA (seven repatriated) and one in Italy (infected in Sierra Leone).

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Epicurve: The epicurve shows the confirmed cases in Guinea and Liberia. In order to better represent the tail of the epidemic, only 2015 data are shown.
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 has been the largest-ever documented epidemic of EVD in terms of number of cases and geographical spread.
The risk of transmission for EU residents and visitors to countries having experienced widespread transmission of EVD is extremely low.
The recent cluster of cases in Liberia was the result of the re-emergence of Ebola virus that had persisted in a previously infected individual. Although the probability of such re-emergence events is low, the risk of further transmission following a re-emergence underscores the importance of implementing a comprehensive package of services for survivors that includes the testing of appropriate bodily fluids for the presence of Ebola virus RNA.

Actions

As of 31 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.

On 23 November 2015, ECDC published an epidemiological update.
On 16 October 2015, ECDC published the latest (13th) update of the rapid risk assessment.
On 16 October 2015, ECDC published Recent development on sexual transmission of Ebola virus.
On 31 July 2015, ECDC published Positive preliminary results of an Ebola vaccine efficacy trial in Guinea.
On 22 January 2015, ECDC published Infection prevention and control measures for Ebola virus disease. Management of healthcare workers returning from Ebola-affected areas.
On 4 December 2014, EFSA and ECDC published a Scientific report assessing risk related to household pets in contact with Ebola cases in humans.
On 29 October 2014, ECDC published a training tool on the safe use of PPE and options for preparing for gatherings in the EU.
On 23 October 2014, ECDC published Public health management of persons having had contact with Ebola virus disease cases in the EU.
On 22 October 2014, ECDC published Assessing and planning medical evacuation flights to Europe for patients with Ebola virus disease and people exposed to Ebola virus.
On 13 October 2014, ECDC published Infection prevention and control measures for Ebola virus disease: Entry and exit screening measures.
On 6 October 2014, ECDC published risk of transmission of Ebola virus via donated blood and other substances of human origin in the EU.
On 22 September 2014, ECDC published assessment and planning for medical evacuation by air to the EU of patients with Ebola virus disease and people exposed to Ebola virus.
On 10 September 2014, ECDC published an EU case definition.

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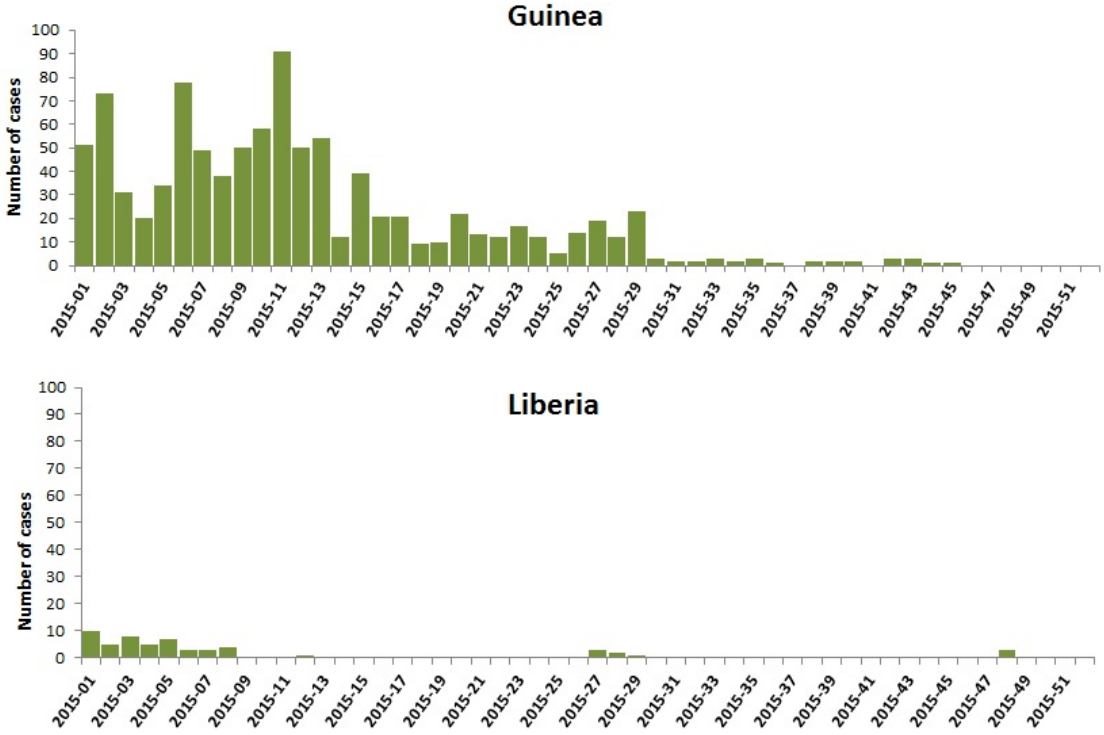
Distribution of confirmed cases of Ebola virus disease by week of reporting in Guinea and Liberia (weeks 01/2015 to 02/2016)

Source: ECDC



Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013 Latest update: 7 January 2016

Epidemiological summary

Cases reported by China since March 2013 have the following geographical distribution: Zhejiang (189), Guangdong (182), 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 influence 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 several 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 areas that are already affected and in neighbouring areas.

Imported cases of influenza A(H7N9) may be detected in Europe. However, the risk of the disease spreading among humans following an importation to Europe is considered to be very low. People in the EU presenting with severe respiratory infection and a history of potential exposure in the outbreak area will require careful investigation in Europe.

Actions

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

ECDC published an updated Rapid Risk Assessment on 3 February 2015.

ECDC published a guidance document Supporting diagnostic preparedness for detection of avian influenza A(H7N9) viruses in

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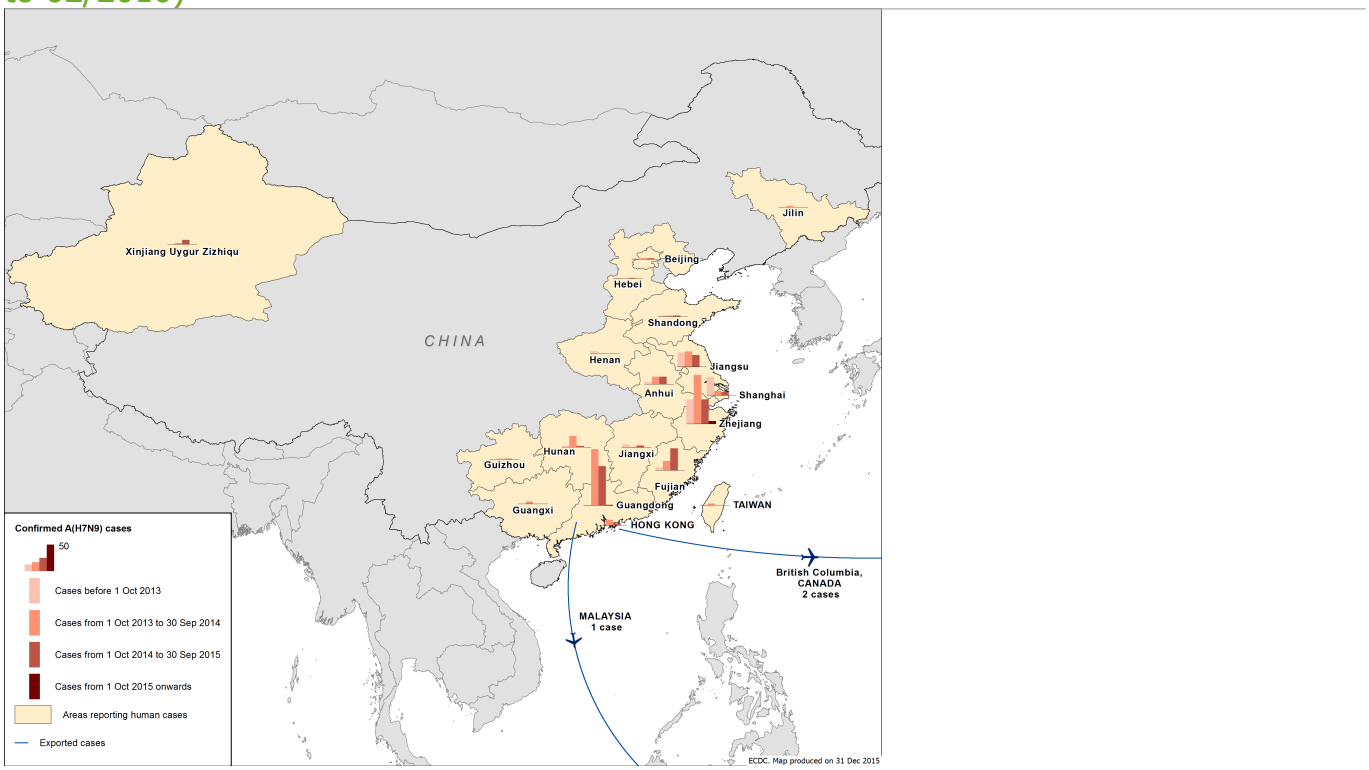
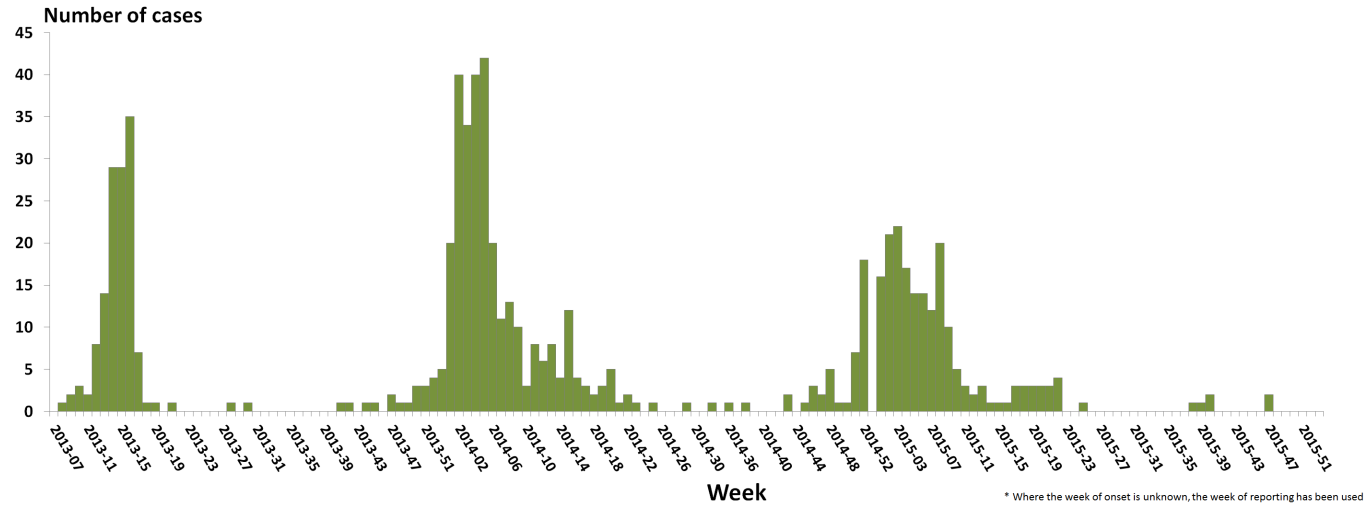
Europe for laboratories on 24 April 2013.

Distribution of confirmed cases of A(H7N9) by four periods of reporting (week 07/2013 to 02/2016)



Distribution of confirmed cases of A(H7N9) by week of reporting (weeks 07/2013 to 02/2016)



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Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015 Latest update: 31 December 2015

Epidemiological summary

As of 7 January 2016, 12 countries in the Americas reported locally acquired cases of Zika virus infection: Brazil, Colombia, El Salvador, Guatemala, Mexico, Paraguay, Suriname, Venezuela, Honduras, Martinique and French Guiana (France), Panama and Puerto Rico (USA). Possible links between Zika virus infection in pregnancy and microcephaly of the foetus are under investigation in Brazil. The country has declared a public health emergency and opened an emergency operations centre as a response, as well as a national centre to combat microcephaly that will focus on controlling *Aedes* mosquitoes, which transmit Zika virus.

In French Polynesia investigations are also ongoing following the detection of 17 cases of central nervous system malformations in foetuses and infants that had occurred in pregnancies during 2014-2015 after the 2013-2014 Zika virus outbreak. None of the mothers described clinical signs of Zika virus infection during pregnancy, but four of the women tested were found positive for flavivirus using IgG serology assays, suggesting a possible asymptomatic Zika virus infection. Based on the temporal correlation of these cases with the Zika virus epidemic, the health authorities of French Polynesia hypothesise that Zika virus infection may be associated with these abnormalities if mothers are infected during the first or second trimester of pregnancy.

Web sources: ECDC Zika Factsheet | WHO DON | PAHO | Colombian MoH | Brazilian MoH | Brazilian microcephaly case definition

ECDC assessment

Further cases of Zika virus infection are expected to be reported in other countries, particularly in the Americas, where the mosquito vector is present.
So far, only a few travel-associated cases have been reported in the EU. With the spread of the Zika virus epidemic in the Americas, the likelihood of travel-related cases in the EU is increasing. Imported cases in the EU Overseas Countries and Territories and the EU Outermost Regions, with onward autochthonous transmission in EU Member States in continental Europe during the summer season in areas where *Aedes albopictus* or *Aedes aegypti* are established, cannot be excluded. Vigilance during the mosquito season is therefore required in areas where a potential vector is present as early detection of cases is essential when it comes to reducing the risk of autochthonous transmission.

Residents and travellers visiting affected areas, particularly pregnant women, need to be advised to take individual protective measures to prevent mosquito bites all day round as Zika virus disease, chikungunya and dengue are transmitted by a daytime-biting mosquito. Consequently, protective measures should be taken, especially during the day.

Clinicians and travel medicine clinics should be aware of the evolution of Zika virus infections in the affected areas and should include Zika virus 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 in pregnant women returning from areas currently experiencing Zika virus infection outbreaks, should prompt a possible investigation for Zika virus infection. In addition, blood safety authorities need to be vigilant regarding the epidemiological situation and might wish to consider the deferral of donors with relevant travel history, in line with measures defined for dengue virus.

This is the first time that Zika virus infections during pregnancy have been suspected of causing congenital malformations. The information currently available is not sufficient to confirm a causative link between microcephaly and Zika infection during pregnancy or to quantify the magnitude of the public health issue.
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 linked to the Zika virus epidemic.
ECDC published a second rapid risk assessment on microcephaly in Brazil on 10 December 2015.

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 7 January 2016

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Epidemiological summary

In 2015, wild poliovirus transmission was at the lowest level ever, with less cases reported from fewer countries than ever before. In 2015, 70 wild poliovirus cases were reported from two countries: Pakistan (51 cases) and Afghanistan (19 cases), compared with 347 cases from nine countries in 2014.

In 2015 and as of 5 January 2016, 26 cases of circulating vaccine-derived poliovirus (cVDPV) had been reported to WHO, compared with 51 for the same period in 2014. The cases this year are from Madagascar (10), Laos (5), Ukraine (2), Pakistan (2), Nigeria (1), Myanmar/Burma (2) and Guinea (4).

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.

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

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