

This weekly bulletin provides updates on threats monitored by ECDC.

## I. Executive summary

### EU Threats

#### Hepatitis A - Multistate (Europe) - 2013 outbreak

Opening date: 9 April 2013

Latest update: 25 April 2013

Between 1 October 2012 and 18 April 2013, Denmark, Finland, Norway and Sweden reported 26 hepatitis A cases due to genotype 1b with three related sequences. None of the cases have travel history outside the EU within the period of their potential exposure. There are 42 additional non-travel-related cases of hepatitis A reported in the four countries for whom the sequence is not known. The source of the outbreak has not been identified but epidemiological investigations in the affected countries point towards frozen berries as vehicle of infection.

→ Update of the week

There have not been updates from the Member States involved since last week's report.

#### Influenza - Multistate (Europe) - Monitoring 2012-2013 season

Opening date: 2 December 2011

Latest update: 25 April 2013

Following the 2009 pandemic, influenza transmission in Europe has returned to its seasonal epidemic pattern, with peak activity seen during winter months. ECDC monitors influenza activity in Europe during the winter seasons and publishes the results on its website in the Weekly Influenza Surveillance Overview.

Weekly reporting on influenza surveillance in Europe for the 2012–13 season started in week 40/2012 and will finish after week 20/2013. Active influenza transmission began around week 49/2012 with ILI/ARI rates peaking in almost all countries between weeks 52/2012 and 8/2013.

→ Update of the week

During week 16/2013, decreasing or stable trends were reported by almost all reporting countries.

## Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011

Latest update: 25 April 2013

Measles, a highly transmissible vaccine-preventable disease, is still endemic in many countries of Europe due to a decrease in the uptake of immunisation. According to the latest enhanced measles surveillance data retrieved from the European Surveillance System (TESSy), the 30 contributing countries (29 EU and EEA countries and Croatia) reported 8 499 cases of measles during the last 12-month period from March 2012 to February 2013. There have been no measles-related deaths during the reporting period, but seven cases were complicated by acute measles encephalitis. During the last 12-month period France, Italy, Romania, Spain and the United Kingdom accounted for 94% of the measles cases. Measles is targeted for elimination in Europe by 2015. Sixteen countries met the elimination target of less than one case of measles per million population during the last 12 months.

→Update of the week

During the last week, two measles outbreaks were reported by the media in Italy. In addition, the United Kingdom and Germany published updated information on the on-going outbreaks there.

## Rubella - Multistate (EU) - Monitoring European outbreaks

Opening date: 7 March 2012

Latest update: 19 September 2012

Rubella, caused by the rubella virus and commonly known as German measles, is usually a mild and self-limiting disease and is an infection 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.

→Update of the week

During the week leading up to 26 April, no new outbreaks were detected.

## Non EU Threats

### New! Hepatitis A travel related - Multistate - Monitoring outbreak

Opening date: 22 April 2013

Latest update: 25 April 2013

From November 2012 to April 2013, several EU Members States reported Hepatitis A virus (HAV) infections affecting travellers returning from Egypt. The identification of the same HAV sequence in 15 cases from three of the affected countries confirms a multinational outbreak. A preliminary descriptive analysis does not allow developing any strong hypothesis on the source of infection. On-going investigations will provide more information.

## Influenza A(H7N9) - China - Monitoring human cases

Opening date: 31 March 2013

Latest update: 25 April 2013

On 31 March 2013, the Chinese health authorities announced the identification of a novel avian influenza A(H7N9) virus in three seriously ill patients in Shanghai. The outbreak has since spread to Zhejiang (44), Shanghai (33), Jiangsu (24), Henan (4), Anhui (4), Beijing (1), Shandong (1), and Taiwan (1). The source of infection and the mode of transmission are yet to be determined. Zoonotic transmission from poultry to humans is the most likely scenario. There is no epidemiological link between most of the cases and sustained human-to-human transmission has not been confirmed. There has been one cluster reported with two confirmed cases (husband and wife). This is the first time that possible human-to-human infection with avian influenza A(H7N9) virus has been identified.

→Update of the week

Between 18 and 25 April 2013, 25 additional confirmed human cases of influenza A(H7N9) virus, including six deaths, have been reported. Since the beginning of the outbreak there have been 112 confirmed cases, including 23 deaths.

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

Opening date: 20 April 2006

Latest update: 25 April 2013

Dengue fever is one of the most prevalent vector-borne diseases in the world, affecting an estimated 50-100 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 the occurrence of locally acquired cases in EU countries where the competent vectors are present. The detection of a dengue outbreak in the Autonomous Region of Madeira, Portugal, further underlines the importance of surveillance and vector control in other European countries.

→Update of the week

The Autonomous Region of Madeira, Portugal, experienced an outbreak of dengue starting in October 2012 with a few sporadic cases still reported between week 1 and week 9 in 2013. So far in 2013, no autochthonous dengue cases have been reported in other European countries.

## Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005

Latest update: 25 April 2013

Polio, a crippling and potentially fatal vaccine-preventable disease mainly affecting children under five years of age, is close to being eradicated from the world after a significant global public health investment and effort. The WHO European Region is polio-free.

→Update of the week

During the week leading up to 25 April 2013, three new polio cases were reported to WHO, all three were wild poliovirus type 1 (WPV1). Two cases were from Nigeria and one from Afghanistan.

## II. Detailed reports

### Hepatitis A - Multistate (Europe) - 2013 outbreak

Opening date: 9 April 2013

Latest update: 25 April 2013

#### Epidemiological summary

Between 1 October 2012 and 18 April 2013, Denmark, Finland, Norway and Sweden have reported 26 hepatitis A cases due to genotype 1b with with three related sequences. None of the cases have travel history outside the EU within the period of their potential exposure. There are 42 additional non-travel-related cases of hepatitis A reported in the four countries for whom the sequence is not known.

Epidemiological investigations in Denmark, Finland and Sweden revealed that all the patients had consumed berries, in particular frozen berries in smoothies. Strawberries were the food item with the strongest association with the disease. No hepatitis A virus (HAV) could be isolated from food samples so far. Food safety authorities and Public Health Authorities in the affected countries are actively collaborating to uncover the vehicle of infection and to prevent occurrences of additional cases. Case definition of confirmed cases has been changed and includes now "a probable case typed with HAV subgenotype IB and an RNA sequence less than 3% different from the "Danish outbreak strain" have been included as confirmed cases.

Following epidemiological investigations, the food authorities in all four countries recommended that citizens should boil frozen berries or berries of non-domestic origin before consumption.

**Web sources:** [ECDC HAV factsheet](#) |

#### ECDC assessment

The identification of closely related HAV sequences in four different countries confirms that this is a multinational food-borne outbreak. The distribution of cases over time suggests a persistent source with possibly one or more vehicles of infections. As the most recent cases had onset in April 2013, the outbreak is most likely still on-going.

#### Actions

ECDC and EFSA published a joint [rapid outbreak assessment](#) on 16 April.

### Influenza - Multistate (Europe) - Monitoring 2012-2013 season

Opening date: 2 December 2011

Latest update: 25 April 2013

#### Epidemiological summary

Twenty-four countries reported low-intensity transmission while three countries (Latvia, the Netherlands and Sweden) still reported medium intensity.

The proportion of influenza-positive sentinel specimens (26%) has continued to decrease since the peak observed in week 5/2013 (61%).

Since week 40/2012, 47% of sentinel surveillance specimens testing positive for influenza virus have been type A and 53% type B. Of the influenza A viruses subtyped, the proportion of A(H1)pdm09 viruses was 62%.

Twenty-five hospitalised, laboratory-confirmed influenza cases were reported by three countries for week 16/2013

**Web source:** [ECDC Weekly Influenza Surveillance Overview](#) |

#### ECDC assessment

As influenza activity continued to decline or had already returned to baseline levels in all reporting countries after more than three months of active transmission, the 2012–2013 influenza season is now moving towards its end.

## Actions

ECDC updated its influenza website for the start of the season and published its annual risk assessment for seasonal influenza 2012-2013 in early February based on data up to week 3/2013.

## Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011

Latest update: 25 April 2013

### Epidemiological summary

#### UK - update

The number of confirmed cases in the measles outbreak in [Wales](#), centred in the Swansea area, rose to 886 (an increase by 121 in a week) by 23 April 2013. There was one fatality reported last week, a 25-year-old man who tested positive for measles but investigations are on-going to establish the exact cause of death. Eighty people have now needed hospital treatment since the outbreak began in November and more than 10 000 people across Wales have been given the MMR vaccine. The outbreak now seems to have spread beyond Wales as there are reports of 24 suspected cases in Shropshire, England.

#### Germany - update

The number of cases reported in [Berlin](#) since February 2013 has risen to 93 (compared to 43 last week), five times as many as in the same period last year. Fifty-six percent of patients are older than 16 years. More than half of the patients needed hospitalisation. Eleven of the twelve districts in Berlin are affected. One of the clusters was associated with a [fruit fair](#), in early February 2013. There were at least five cases reported from other provinces (Hamburg, Bavaria, Hesse, Brandenburg) with likely connection to the fair. Another measles case with epidemiological link to the fair was reported from Malmö, Sweden.

#### Italy

Two outbreaks are reported in Italy, one from [Genoa](#) with 15 cases, of which two are hospitalised, and [Rimini](#) with an unknown number of cases with two 5-year-old children hospitalised in serious condition.

In addition to the current outbreaks, Sweden and Denmark have reported outbreaks so far in 2013.

Web sources: [ECDC measles and rubella monitoring](#) | [ECDC/Euronews documentary](#) | [WHO Epidemiological Briefs](#) | [MedISys Measles page](#) | [EUVAC-net ECDC](#) | [ECDC measles factsheet](#) | [Public Health Wales](#) |

### ECDC assessment

There was a significant reduction in notified cases in 2012 compared to the two previous years indicating that the incidence at EU/EEA level was back at the level before the 2010–2011 outbreaks. However, this is just one single annual incidence figure and does not signify a longer-term downward trend in measles notifications. Endemic measles transmission continues in a number of EU countries and the risk of new outbreaks increases as the unvaccinated population grows over time. In endemic areas, measles incidence fluctuates in multi-annual cycles which are determined by the vaccination uptake over time and the size of the susceptible population.

## Actions

Elimination of measles requires consistent vaccination coverage above 95% with two doses of measles vaccine in all population groups, strong surveillance and effective outbreak control measures. ECDC closely monitors measles transmission and outbreaks in the EU and neighbouring countries in Europe through enhanced surveillance and epidemic intelligence activities.

## Rubella - Multistate (EU) - Monitoring European outbreaks

Opening date: 7 March 2012

Latest update: 19 September 2012

### Epidemiological summary

No new outbreaks have been identified since the last update.

The 26 EU and EEA countries contributing to enhanced rubella surveillance together reported 21 549 cases during the last 12-month period from March 2012 to February 2013. Poland and Romania accounted for 99% of all reported rubella cases in the 12-month period. Since August 2012, Poland alone contributed over 90% of cases, due to the decreasing trend in Romania.

**Web sources:** [ECDC measles and rubella monitoring](#) | [WHO epidemiological brief summary tables](#) | [ECDC rubella factsheet](#)

## ECDC assessment

As rubella is typically a mild and self-limiting disease with few complications, the rationale for eliminating rubella would be weak if it were not for the virus' teratogenic effect. When a woman is infected with the rubella virus within the first 20 weeks of pregnancy, the foetus has a 90% risk of being born with congenital rubella syndrome (CRS), which entails a range of serious incurable illnesses. CRS surveillance plays an important role but tends to be biased towards the severe end of the spectrum as the rubella infection is known to cause a wide range of conditions from mild hearing impairment to complex malformations which are incompatible with life. Routine control of immunity during antenatal care is important for identifying susceptible women who can be immunised after giving birth and for surveillance of the size of the susceptible female population. The increase in the number of rubella cases reported in 2012 compared with 2011 and the potential for an increase in the number of babies born with CRS are of concern.

## 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 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.

## **New! Hepatitis A travel related - Multistate - Monitoring outbreak**

Opening date: 22 April 2013

Latest update: 25 April 2013

## Epidemiological summary

Denmark, Estonia, Finland, France, Germany, Ireland, Latvia, Lithuania, the Netherlands, Norway, the Slovak Republic, Sweden and the United Kingdom reported hepatitis A infection affecting 100 travellers returning from Egypt. Of these, 15 cases share an identical RNA sequence. Onset of symptoms dates (or laboratory testing date for those with no available onset dates) was between 1 November 2012 and 17 April 2013. Interviewed cases reported having travelled to at least three different locations in the Red Sea region (Sharm-El-Sheikh, Hurghada and Marsa Alam) and stayed at several different hotels and resorts.

## ECDC assessment

HAV infections in travellers returning from Egypt have been reported in several EU Member States. The same HAV sequence was identified in cases from the Netherlands, Norway and UK confirming a multinational outbreak. The distribution of cases over time suggests a persistent source outbreak - potentially food borne - the source of which has not yet been identified. Public health authorities in the affected countries, ECDC and WHO are actively collaborating to detect the source of the infection in order to prevent the occurrences of additional cases.

## Actions

ECDC is preparing a rapid risk assessment.

## **Influenza A(H7N9) - China - Monitoring human cases**

Opening date: 31 March 2013

Latest update: 25 April 2013

## Epidemiological summary

The influenza A viruses from the first three cases were non-subtypeable and were sent to the WHO Influenza Collaborating Centre at the Chinese Centre for Disease Control and Prevention (CCDC). The genetic comparison indicated that these cases were caused by a novel reassortant avian influenza virus with avian origin genes from both A(H7N9) and A(H9N2). No similar viruses have been seen before and A(H7N9) differs from A(H7) and A(H9) viruses that have been seen previously in Europe. No vaccine is currently available for this subtype of the influenza virus. Preliminary test results suggest that the virus is susceptible to the

neuraminidase inhibitors (oseltamivir and zanamivir).

Since 31 March 2013, one hundred and twelve cases of human infection with influenza A(H7N9) have been reported from eastern China: Zhejiang (44), Shanghai (33), Jiangsu (24), Henan (4), Anhui (4), Beijing (1), Shandong (1), and Taiwan (1). In addition, the virus has been detected in one asymptomatic case in Beijing. Onset of disease has been between 19 February and 18 April 2013. The date of disease onset is currently unknown for fourteen patients. Most cases have developed severe respiratory disease. Twenty three patients have died (case-fatality ratio=21%). The median age is 62 years with a range between four and 91 years; 33 of 112 patients are female.

The Chinese health authorities are responding to this public health event with enhanced surveillance, epidemiological and laboratory investigation and contact tracing. The animal health sector has intensified investigations into the possible sources and reservoirs of the virus. The authorities reported to the World Organisation for Animal Health (OIE) that avian influenza A(H7N9) was detected in samples from pigeons, chickens and ducks, and in environmental samples from live bird markets ('wet markets') in Shanghai, Jiangsu, Anhui and Zhejiang provinces. Authorities have closed markets and culled poultry in affected areas.

**Web sources:** [Chinese CDC](#) | [WHO](#) | [WHO FAQ page](#) | [Centre for Health Protection Hong Kong](#) | [OIE](#) | [Chinese MOA](#) |

## ECDC assessment

The source and mode of transmission have not been confirmed. The outbreak is caused by a reassortant avian influenza virus with low pathogenicity for birds, hence it does not cause the signal 'die-offs' in poultry associated with highly pathogenic strains of avian influenza viruses. Genetic analyses of the isolates have shown changes which suggest that the H7N9 virus may have greater ability to infect mammalian species, including humans, than most other avian influenza viruses. Pathogenicity for humans appears to be high and higher age appears to be a risk factor for disease.

The most likely scenario is that of A(H7N9) spreading undetected in poultry populations and occasionally infecting humans who have close contact with poultry or poultry products but this will have to be validated as further data become available.

At this time there is no evidence of any human-to-human transmission. Nearly 2 000 close contacts of confirmed cases are reported to have been followed up without evidence of person-to-person transmission.

There is one family cluster with two confirmed cases for which human-to-human transmission cannot be ruled out but where common exposure is the most likely explanation.

An increasing incidence of sporadic cases and expansion of geographic spread in China and possibly neighbouring countries is expected over the coming weeks. Individual imported human cases to Europe cannot be ruled out and countries need to prepare for detecting and diagnosing such cases. Critical developments that would change this assessment would be evidence of sustained human-to-human transmission and detection of avian influenza A(H7N9) in bird populations in Europe.

## Actions

ECDC is closely monitoring developments and is continuously re-assessing the situation in collaboration with WHO, the US CDC, the Chinese CDC and other partners. A senior ECDC expert will be returning from expert mission in China jointly lead by WHO and Chinese health authorities on 26 April 2013.

This epidemiological update does not change the conclusions and recommendations of the updated [rapid risk assessment](#) published on 12 April 2013. ECDC has published an [epidemiological update](#) on A(H7N9) on 26 April.

ECDC prepared a guidance [Supporting diagnostic preparedness for detection of avian influenza A\(H7N9\) viruses in Europe](#) for laboratories. was published on 24 April 2013.

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

Opening date: 20 April 2006

Latest update: 25 April 2013

### Epidemiological summary

**Europe:** There have been no reports of confirmed autochthonous dengue cases in Europe in 2013, besides the dengue outbreak in Madeira.

**Asia:** Regional dengue activity is variable. As of 17 April, Cambodia, Lao PDR, Singapore and Vietnam have all reported more cases in 2013 than 2012 for the same time period. Singapore is seeing continuing increasing levels with 515 cases reported last

7/10

week, according to the National Environmental Agency. Malaysia and Lao PDR are experiencing sustained levels of dengue activity. However, the recent trends (based on a three week moving average) are declining in Australia, Cambodia and the Philippines.

**The Caribbean:** In recent weeks, the French overseas territory of Saint Barthelemy is facing an epidemic of dengue. According to InVS, during the second week of April, 11 laboratory confirmed cases of dengue were reported, the highest number of cases detected on the island since June 2010. The Dominican Republic has recorded more than 3 300 suspected cases and 27 deaths so far this year, according to the Ministry of Public Health.

**Central and South America:** An increasing trend of dengue cases is reported in Mexico and Honduras. In South America, high dengue activity is reported across most states of Brazil whilst Argentina, Peru and Paraguay are all reporting increasing levels. In French Guyana, almost 8 000 dengue cases and three deaths have been reported since last September, according to the Ministry of Health.

**Pacific:** The dengue outbreak in the Solomon Islands continues to spread with 3 189 cases and four deaths reported since the outbreak began in February 2013.

**Africa:** According to a media report, since 31 March 2013 Luanda province in Angola has reported 19 cases of dengue fever.

#### Web sources:

[HealthMap](#) | [MedISys](#) | [ProMED Asia update](#) | [ProMED Americas update](#) | [WPRO](#) | [CDC](#) |

#### ECDC assessment

ECDC monitors individual outbreaks, seasonal transmission patterns and inter-annual epidemic cycles of dengue through epidemic intelligence activities in order to identify significant changes in disease epidemiology. Of particular concern is the potential for the establishment of dengue transmission in Europe. Before the current outbreak in the Autonomous Region of Madeira, local transmission of dengue was reported for the first time in France and Croatia in 2010. Imported cases are detected in European countries, highlighting the risk of locally acquired cases occurring in countries where the competent vectors are present.

#### Actions

ECDC has published a technical [report](#) on the climatic suitability for dengue transmission in continental Europe and [guidance for invasive mosquitoes' surveillance](#).

## Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005

Latest update: 25 April 2013

### Epidemiological summary

During the past week, three new polio cases were reported to WHO, two from Nigeria and one from Afghanistan. All three were WPV1.

Globally, 22 cases of polio have been reported so far in 2013 compared with 48 for the same period in 2012.

Web sources: [Polio Eradication: weekly update](#) | [MedISys Poliomyelitis](#) | [ECDC Poliomyelitis factsheet](#) | [WHO EMRO](#)

#### ECDC assessment

The last polio cases in the European Union occurred in 2001 when three young Bulgarian children of Roma ethnicity developed flaccid paralysis caused by WPV. Investigations showed that the virus originated from India. The latest outbreak in the WHO European Region was in Tajikistan in 2010 when WPV1 imported from Pakistan caused an outbreak of 460 reported cases. The last indigenous WPV case in Europe was in Turkey in 1998. An outbreak in the Netherlands in a religious community opposed to vaccinations caused two deaths and 71 cases of paralysis in 1992.



## Actions

ECDC follows reports on polio cases worldwide through epidemic intelligence in order to highlight polio eradication efforts and identify events that increase the risk of re-introduction of wild poliovirus (WPV) into the EU.

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