

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

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

Opening date: 2 December 2011

Latest update: 24 May 2012

Following the 2009 pandemic, influenza transmission in Europe has returned to its seasonal epidemic pattern, with peaks 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.

→Update of the week

During week 49/2012, clinical influenza activity of low intensity was notified by all 24 countries reporting, with the majority of them indicating sporadic geographic spread.

Dengue - Portugal - Madeira outbreak

Opening date: 10 October 2012

Latest update: 13 December 2012

On 3 October 2012, the public health authorities of Portugal reported two autochthonous cases of dengue fever in patients residing in the Autonomous Region of Madeira. This signalled the onset of the first recorded outbreak of dengue in Madeira. The presence of *Aedes aegypti* mosquitoes, the main vector for transmission of the virus, has been documented in Madeira since 2005.

→Update of the week

As of 9 December 2012, 2 050 cases of dengue fever have been reported from Madeira. Between 3 and 9 December, 57 cases were reported, representing a 44% decrease from the previous week. As of 13 December, 58 cases of dengue have been reported among European travellers returning from Madeira since the start of the outbreak.

Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011

Latest update: 22 October 2012

Measles, a highly transmissible vaccine-preventable disease, is still endemic in many countries of Europe due to a decrease in the uptake of immunisation. More than 30 000 cases were reported in EU Member States in each of the last two years. However, the numbers of outbreaks and reported cases in Member States so far in 2012 are significantly lower than during 2010 and 2011. As of 30 September, 5 360 cases of measles were reported to the European Surveillance System (TESSy) for 2012. France, Italy, Romania, Spain and the United Kingdom accounted for 92% of the reported cases.

→Update of the week

Up to 13 December 2012, no new outbreaks were detected.

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

No new outbreaks were detected in EU Member States during the past week.

Non EU Threats

Novel Coronavirus - Multistate - Severe respiratory syndrome

Opening date: 24 September 2012

Latest update: 4 December 2012

Since April 2012, nine patients who presented with symptoms of severe acute respiratory syndrome have tested positive for a novel coronavirus. Cases have occurred in Saudi Arabia, Qatar and Jordan. There have been five associated deaths. The novel coronavirus has been temporarily named hCoV-EMC.

→Update of the week

No further cases of the novel coronavirus have been reported.

Dengue - Multistate (world) - Monitoring seasonal epidemics

Opening date: 20 April 2006

Latest update: 11 December 2012

Dengue fever is one of the most prevalent vector-borne diseases in the world, affecting an estimated 50 to 100 million people each year, mainly in the tropical regions of the world. The identification of sporadic autochthonous cases in non-endemic areas in recent years 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, underlines further the importance of surveillance and vector control in other European countries (see separate section).

→Update of the week

There is an ongoing outbreak of dengue in the Autonomous Region of Madeira, Portugal, described in a separate section of this report, with some imported cases reported from other EU Member States.

No autochthonous cases were reported in other European countries so far this year.

Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005

Latest update: 13 December 2012

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. So far in 2012, 213 cases have been reported worldwide compared with 571 cases during the same period last year.

→Update of the week

Eight new polio cases were reported to WHO during the week leading up to 11 December, seven in Nigeria and one in Afghanistan. Of the seven cases reported in Nigeria, five were WPV1 and two were WPV3. The one reported case in Afghanistan was WPV1.

II. Detailed reports

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

Opening date: 2 December 2011

Latest update: 24 May 2012

Epidemiological summary

Weekly reporting on influenza surveillance for the 2012–13 season started in week 40/2012 in Europe. In week 49, all 24 countries reporting experienced low-intensity of influenza-like illness or acute respiratory infections. For the first time this season, the majority of the countries reported sporadic geographic spread. Of 573 sentinel specimens tested across 24 countries, 76 (13.3%) were positive for influenza virus. This is a second week of a notable increase in positive specimens, compared with week 47/2012 when 3.1% of specimens were positive.

Of the influenza virus detections in sentinel specimens since week 40/2012, 53% were type A and 47% were type B viruses. Of the A viruses subtyped, 47% were A(H3) and 53% were A(H1).

One hospitalised laboratory-confirmed influenza case due to influenza B virus infection was reported in week 49.

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

ECDC assessment

Although the intensity remains low, the influenza season has started in EU/EEA countries: data from the majority of countries indicate local or sporadic spread as well as an increasing proportion of specimens positive for influenza virus.

The viruses circulating this season remain well-matched with the 2012–13 seasonal vaccine viruses.

Actions

ECDC updated its influenza website for the start of the season.

Dengue - Portugal - Madeira outbreak

Opening date: 10 October 2012

Latest update: 13 December 2012

Epidemiological summary

On 3 October 2012, the Portuguese public health authorities reported two cases of dengue infection confirmed in patients residing on the island of Madeira in the Autonomous Region of Madeira located around 400 km from the Canary Islands, 650 km from the African coast, and 1 000 km from the European continent. The autonomous region has 268 000 inhabitants.

As of 9 December, 2 050 cases of dengue infection have been reported from the public health sector in Madeira. Since the beginning of the outbreak, there have been 121 patients hospitalised and two remained in hospital as of 9 December. No deaths have been recorded. The sequence analysis of viral genomes (600 nucleotides) from several positive human samples indicates high sequence similarity with DENV-1 circulating in Venezuela and Colombia, strongly suggesting a Latin American origin.

The vast majority of confirmed cases are from the city of Funchal, which is the main port on Madeira island. The island of Madeira has an established mosquito population of *Aedes aegypti*, the main vector of dengue in tropical and subtropical countries.

As of 13 December, 58 patients have been diagnosed with dengue after returning from Madeira: in Portugal (ten); the UK (20); Germany (14); France (three); Finland (four); Croatia, Denmark, Slovenia, Spain, Sweden, Norway and Switzerland have each reported one case.

Web sources: [ECDC fact sheet for health professionals](#) | [PT Directorate-General of Health](#) | [National Institute of Health Dr. Ricardo Jorge](#) | [ECDC Rapid Risk Assessment](#) | [WHO](#) | [Madeira Institute of Health Administration and Social Affairs](#)

ECDC assessment

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This is the first known occurrence of locally transmitted dengue infection in the Autonomous Region of Madeira, and consequently a new geographical area reporting autochthonous cases in the EU.

This is a significant public health event but not entirely unexpected because of the known presence of *Aedes aegypti*, a competent vector for dengue. The updated figures indicate that the outbreak has peaked, with a decrease in the number of cases being reported for the last three consecutive weeks. Despite this, the outbreak is still ongoing and therefore more cases among the island's population as well as returning tourists should be expected, particularly given that visitors to the region peak over the Christmas period. The cases of dengue among returning travellers from the island highlight the need for travellers to the island of Madeira to take measures to reduce mosquito bites during the day. Travellers experiencing febrile symptoms with severe headache, retro-orbital pain, myalgia, arthralgia and maculo-papular rash within 21 days of visiting the island of Madeira are advised to seek medical advice.

Neighbouring geographical areas (e.g. Canary Islands) and other EU Member States need to assess the risk for the establishment of *Aedes* mosquito populations and introduction of dengue. The epidemiological situation does not imply the need for any trade or travel restriction beyond the disinfestation policies currently implemented.

Actions

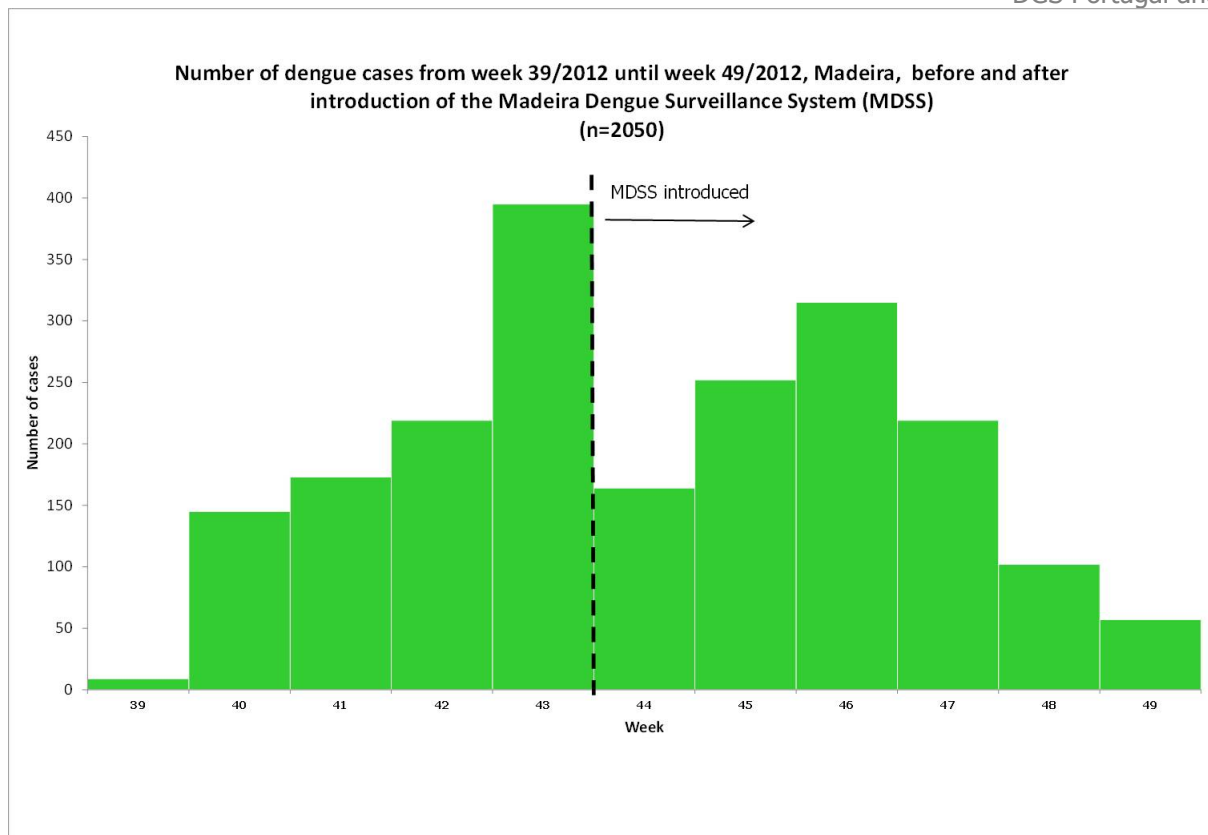
ECDC published an updated [rapid risk assessment](#) concerning the autochthonous dengue cases in Madeira. An epidemiological update was published on the ECDC website on 13 December.

Portuguese authorities published recommendations regarding [personal protective measures](#), and [measures for the safety](#) of blood, cells, tissues and organ donations within the region.

Blood donor deferral for 28 days from day of departure for travellers returning from the Autonomous region of Madeira is now recommended in other EU countries.

Dengue cases by week, Madeira 2012

DGS Portugal and ECDC



Measles - Multistate (EU) - Monitoring European outbreaks

Opening date: 9 February 2011

Latest update: 22 October 2012

Epidemiological summary

EU Member States

No new outbreaks were detected in EU Member States since the last update.

Web sources: [ECDC measles and rubella monitoring](#) | [ECDC/Euronews documentary](#) | [WHO Epidemiological Brief](#) | [MedISys Measles page](#) | [EU-VAC-net ECDC](#) | [ECDC measles factsheet](#)

ECDC assessment

Considerably fewer measles cases have been reported in 2012 than during the same period in 2011, primarily due to the dramatic decrease in the number of cases reported from France. There was no increase in the number of cases during the peak transmission season from February to June and there have been very few outbreaks detected by epidemic intelligence methods so far in 2012.

ECDC closely monitors measles transmission and outbreaks in the EU and neighbouring countries in Europe through enhanced surveillance and epidemic intelligence activities. The countries in the WHO European Region, which include all EU Member States, have committed to eliminating measles and rubella transmission by 2015. 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.

Rubella - Multistate (EU) - Monitoring European outbreaks

Opening date: 7 March 2012

Latest update: 19 September 2012

Epidemiological summary

No new outbreaks were identified since the last update.

From 1 January to 30 September 2012, 25 759 cases of rubella were reported by the 26 EU/EEA countries contributing to the enhanced surveillance for rubella. Poland and Romania accounted for 99% of all reported rubella cases. Romania in particular has experienced a significant increase in the number of reported cases compared with the same period in 2011. Other countries that reported an increased number of rubella cases in 2012 include the UK, Spain and Sweden.

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 because rubella virus can cause a wide range of conditions from mild hearing impairment to complex malformations which are incompatible with life, such surveillance is biased towards the severe end of the spectrum. 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 so far 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 (TESSy) 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 for the achievement of the 2015 rubella and congenital rubella elimination target.

Novel Coronavirus - Multistate - Severe respiratory syndrome

Opening date: 24 September 2012

Latest update: 4 December 2012

Epidemiological summary

A first case, reported on 20 September through ProMED, was a 60-year-old patient in Jeddah, Saudi Arabia. He was admitted to hospital on 13 June with severe pneumonia. He developed acute renal failure and died on 24 June. Post mortem lung tissue tests were negative for influenza virus A, influenza virus B, parainfluenza virus, enterovirus and adenovirus. Testing with a pancoronavirus RT-PCR was positive for a coronavirus and the virus genome was later sequenced in Erasmus Medical Centre, Rotterdam, and identified as a putative novel beta-coronavirus, closely related to bat coronaviruses.

A second case was reported on Saturday 22 September, by the UK Health Protection Agency (HPA). The case was a 49-year-old Qatari with no underlying health conditions and a history of travel to Mecca, Saudi Arabia. He developed respiratory symptoms on 3 September, and on 7 September was admitted to an intensive care unit (ICU) in Doha, Qatar, where he subsequently developed renal failure. He was transferred by air ambulance to an ICU in the United Kingdom on 11 September. On 21 September, tests on samples from this patient using a pancoronavirus RT-PCR test were positive. Comparison of a 250bp PCR fragment between this and the isolate of the first case performed by the Erasmus Medical Centre showed 99.5% sequence homology (one nucleotide difference).

A third case of infection with the novel coronavirus was reported on 4 November by Saudi Arabia. The patient was admitted to

hospital in Riyadh with pneumonia and was subsequently diagnosed with the novel coronavirus by RT-PCR. This patient also developed renal failure, however he did have a medical history of only one functional kidney. He is out of intensive care and currently recovering. A case report on this case was published in the [Saudi Medical Journal](#) this week.

Germany reported a fourth case of the novel coronavirus on 23 November in a patient from Qatar, with onset of symptoms in October. He was initially treated in Qatar but was later transferred to Germany for treatment for severe respiratory distress syndrome and acute renal failure. The diagnosis of the novel coronavirus was made at the Health Protection Agency using samples sent from Qatar. He has been discharged from hospital. The patient has no epidemiological link to the previous cases.

Also on 23 November, WHO provided information on the above mentioned fourth case, and two further confirmed cases in Saudi Arabia, one of whom died. These two cases in Saudi Arabia were part of cluster in a family household involving two additional cases: one of whom also died was confirmed as positive on 28 November; the other recovered and is considered a probable case.

On 30 November WHO confirmed that two samples, taken during an investigation into an unexplained respiratory disease cluster in Jordan in April 2012, have been retrospectively tested and found to be positive for novel coronavirus. Both of these two cases had fatal outcomes.

The detection of these two clusters could indicate limited person-to-person transmission or exposure to a common source. However, only careful investigation can help to distinguish between those two.

As of 13 December, a total of nine laboratory confirmed cases of the novel coronavirus have been reported to WHO – five cases (including three fatalities) from Saudi Arabia, two cases from Qatar, and two cases (both fatal) from Jordan.

Web sources: [WHO - Global Alert and Response - Coronavirus infections](#) | [HPA infection control advice](#) | [Partial genetic sequence information](#) | [ProMed link to third reported case](#) | [whole genome sequence](#) | [ProMed regarding fourth case](#) | [RKI press release](#) | [WHO Interim surveillance recommendations for human infection with novel coronavirus](#)

ECDC assessment

A novel coronavirus has been identified in nine patients with severe respiratory and, in five cases, renal disease. Two of the cases were treated in the United Kingdom and Germany after medical evacuation, but so far there are no indications of transmission of the virus within the EU.

Research on the complete genome sequence of HCoV-EMC/2012 has characterised the virus as a new genotype that is closely related to bat coronaviruses that are distinct from SARS-CoV. At present, the source and possible routes of transmission of the virus remain unknown; however, all cases have been reported from the countries of the Arabian Peninsula and the neighbouring country of Jordan. The detection of a household cluster, and another possible cluster in Jordan, indicate either limited person-to-person transmission or exposure to a common source.

It is possible that enhanced surveillance in the Arabian Peninsula, neighbouring countries, and worldwide will detect additional sporadic cases or clusters.

Actions

ECDC published an updated [rapid risk assessment](#) related to this event on 7 December. The results of a survey to determine the laboratory capacity for testing for the novel coronavirus in Europe, conducted by ECDC in coordination with WHO Regional Office for Europe, was published last week in [EuroSurveillance](#).

ECDC continues to closely monitor this event.

Dengue - Multistate (world) - Monitoring seasonal epidemics

Opening date: 20 April 2006

Latest update: 11 December 2012

Epidemiological summary

Europe: There are no reports of other confirmed autochthonous dengue infections in Europe so far in 2012 besides the ongoing dengue outbreak in Madeira.

Asia: Regional dengue activity is variable. While Australia, Cambodia, Laos, Malaysia, the Philippines and Vietnam have reported more cases in 2012 than 2011 for the same time period, the recent trend is declining in Australia, Cambodia, Laos, and Singapore.

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While the increase in Malaysia is small, Vietnam has seen a large increase. Of note this week, Australia reported two cases of dengue fever in Cairns, Queensland, and health authorities have announced that they expect more cases. In the rest of Asia, India is experiencing increased dengue activity across most states.

Latin America: High activity is reported across Central America. In South America, most countries are experiencing increased dengue activity, except El Salvador, which has a declining trend. In Bolivia, three new suspected cases of DENV-4 have been reported in Puerto Evo, in Pando, which identified its first case of DENV-4 last week. Overall, Peru reports an increasing trend of dengue cases, but the Ucayali region has entered a stabilisation phase following a recent downward trend of reported cases, according to the Ministry of Health.

The Caribbean: Latest figures from CDC show that Puerto Rico reported 402 suspected dengue cases in week 46. So far in 2012, there have been 9 175 suspected cases, 25 confirmed cases of DHF and 6 fatalities. Overall, suspected dengue cases have been steadily declining in Puerto Rico since week 43. In other regions, Jamaica is showing a recent declining trend. Official figures from the Ministry of Health of the Dominican Republic have confirmed more than 8 000 reported dengue cases, 122 severe cases and 52 deaths so far this year.

The Pacific: As of 12 December 2012, New Caledonia has reported 226 cases of dengue fever since November. The predominant serotype of cases is DENV-1. New Caledonia is entering a new phase of the epidemic after the first wave of lesser magnitude between late April and early July 2012. Dengue cases for this new phase of the epidemic are primarily concentrated in Nouméa, Dumbéa and Mont Dore provinces.

Web sources:

[HealthMap](#) | [MedISys](#) | [ProMED Asia update](#) | [ProMED Americas update](#) | [PAHO/AMRO](#) | [WPRO](#) | [CDC](#) | [ECDC](#) | [WHO](#) | [InVS](#)

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. Local transmission of dengue was reported for the first time in France and Croatia in 2010, and imported cases are detected in other European countries, highlighting the risk of locally acquired cases occurring in countries where the competent vectors are present.

Assessment in relation to the outbreak in Madeira: see separate section.

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: 13 December 2012

Epidemiological summary

During the past week, eight new polio cases were reported to WHO, seven in Nigeria and one in Afghanistan. Of the seven cases reported in Nigeria, five were WPV1 and two were WPV3. The one reported case in Afghanistan was WPV1.

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

ECDC assessment

The WHO European Region remains polio-free.

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

The last polio cases in the European Union occurred in 2001 when three young Bulgarian children of Roma ethnicity developed flaccid paralysis from 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.

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