

This weekly bulletin provides updates on threats monitored by ECDC.

## I. Executive summary

### EU Threats

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#### Typhoid fever outbreak - mass gathering - Italy - 2017

Opening date: 11 September 2017

Latest update: 29 September 2017

On 8 September 2017, France reported three cases of typhoid fever among unvaccinated participants to a mass gathering event called the Rainbow Gathering that took place in Tramonti di Sopra, Friuli-Venezia Giulia region, Italy, from 23 July to 21 August 2017 and hosted around 3 000 participants.

##### →Update of the week

On 27 September Slovenia reported a case of *Salmonella* Typhi through the Early Warning and Response System (EWRS). The case attended the Rainbow Gathering in Italy from 23 July till 30 July, and developed symptoms on 1 August. Following confirmation, screening samples will be taken from five family contacts and four close friends. The same day, Germany reported a third case of typhoid fever linked to the same event via EPIS-FWD. In addition ECDC was notified by email of a case linked to this event in New Zealand.

#### Chikungunya - Europe - 2017

Opening date: 15 September 2017

Latest update: 29 September 2017

Since August 2017, France and Italy have reported the autochthonous transmission of chikungunya virus, respectively in the Var department, France and the Lazio region, Italy. The two events are involving strains from different origin and therefore are not related.

##### →Update of the week

Since the previous CDTR and as of 22 September 2017, [Italy](#) reported 10 additional confirmed cases in Rome (5) and Anzio (5). Since the previous CDTR, France did not report additional cases.

## West Nile virus – Multistate (Europe) – Monitoring season 2017

Opening date: 30 May 2017

Latest update: 29 September 2017

During the West Nile virus transmission season, from June to November, ECDC monitors the occurrence of cases of West Nile fever in EU Member States and neighbouring countries in order to inform the blood safety authorities about areas with ongoing virus transmission. In 2016, 225 human cases of West Nile fever were reported in EU Member States and 267 cases were reported in the neighbouring countries.

→Update of the week

Between 21 and 28 September 2017, six new cases were reported by Romania. Austria reported two cases, Hungary reported two cases, Greece reported two cases and Italy reported two cases. Serbia reported eight new cases. All cases were notified in previously affected areas. Three deaths due to West Nile fever have been reported by Greece, Hungary and Italy this week. In addition, Italy reported eight West Nile fever equine cases and Greece reported one West Nile fever equine case through the Animal Disease Notification System (ADNS) of the European Commission

Sources: [TESSy](#) and [ADNS](#)

## Non EU Threats

### Travel-associated Legionnaires' disease – Dubai, UAE – 2016/2017

Opening date: 10 November 2016

Latest update: 29 September 2017

In October 2016, ECDC observed an increase in the number of cases of Legionnaires' disease associated with travel (TALD) to Dubai, United Arab Emirates (UAE). TALD cases associated with travel to Dubai have returned to baseline values observed from 2012 through 2016.

→Update of the week

Since the last update, an additional case was reported by Denmark in the last week. The case was associated with a commercial accommodation site.

### Communicable disease risks – Hurricane Irma – 2017

Opening date: 7 September 2017

Latest update: 29 September 2017

Between 6 and 8 September 2017, Hurricane Irma hit several islands in the Caribbean, including the EU Outermost regions (OMRs) and the Overseas Countries and Territories (OCTs) of Antigua, Barbuda, the Turks and Caicos Islands, Saint-Barthélemy and Saint Martin island (both parts, Sint Maarten and St. Martin).

→Update of the week

In Haiti, during the week 2017-37, authorities report 329 cholera suspect cases. This is an increase of 18% compared with week 2017-36 (1 - 9 September) when 279 cases were reported. The main affected province is Artebonite. According to media reports, 112 deaths linked to Hurricane Irma have been reported in the Caribbean and Florida. No other outbreaks have been detected in the affected islands.

## II. Detailed reports

### Typhoid fever outbreak - mass gathering - Italy - 2017

Opening date: 11 September 2017

Latest update: 29 September 2017

#### Epidemiological summary

On 8 September 2017, France reported three confirmed cases of typhoid fever among unvaccinated participants to the Rainbow Gathering that took place in north-eastern Italy, in Tramonti di Sopra, Pordenone from 23 July to 21 August 2017. The three patients are aged 3, 24 and 26 years. Symptom onset ranged from 10 August to 28 August and cases were laboratory-confirmed between 31 August and 2 September. Participants reported poor hygiene conditions during the event that was attended by 3 000 participants, including bathing in a river and using collective toilets dug in the ground. As of 28 September, several EU countries reported additional cases related to this mass gathering: France (three confirmed cases), Germany (three confirmed cases), the Czech Republic (one confirmed case), Croatia (one confirmed case), Italy (one confirmed case) and Slovenia (one confirmed case). In addition through email correspondence ECDC was notified of a case linked to this event in New Zealand. Austria, Denmark, Finland, Hungary, Ireland, the Netherlands, Norway and Sweden report no typhoid fever cases associated with this event or no cases at all in 2017.

**TESSy data:** Each year, 600 to 700 cases of typhoid fever are reported in the EU/EEA by 25 countries. The UK, France and Italy account respectively for 34%, 21% and 17% of the cases. Travel information was available for 53% cases in 2012-2016 and of these, the majority (87%) were reported as associated to travel. India and Pakistan accounted for 60% of the travel-associated cases. Thirty-five percent of the cases were 25-44 years old and male cases were slightly more common than female, particularly in this age group.

**Sources:** [ECDC typhoid and paratyphoid page](#) | [European Rainbow gathering calendar](#) |

#### ECDC assessment

Overall, eleven confirmed cases were reported associated with this event. Identification of additional typhoid fever cases associated with this event is not unexpected as the gathering lasted four weeks and a large part of the participants are likely non-immunised. The incubation period for typhoid fever is usually 8 to 14 days but can be up to 60 days. There is a very low risk for further spread to the general population in the EU/EEA.

While humans are the only reservoir for the causative agent *Salmonella* Typhi, 2-5% of middle-aged infected individuals can become chronic carriers, with the possibility to transmit the disease without experiencing symptoms. Typhoid fever vaccination is not recommended for European residents unless they travel to endemic countries. Vaccine effectiveness is moderate and protection does not last long. Also, vaccination is often not accepted by certain target groups.

Rainbow gatherings are often connected to specific communities and target audiences. [Rainbow gatherings](#) are currently or have been recently held in southern Italy, the Czech Republic, in the south-east of England, Bulgaria, Hungary, and the Spanish Pyrenees. Countries hosting Rainbow Gatherings should consider increasing awareness with regard to the risk of contracting typhoid fever, especially if there are non-immunised participants who just returned from endemic countries, and make recommendations for sanitation, hand washing, food handling hygiene and vaccination campaigns among participants. There is a low risk for further spread to the general population in the EU/EEA. The risk is mostly associated with food handling by carriers. In addition to emphasising hand washing as a routine precautionary measure and scrupulous cleanliness when handling food, testing of food handlers at recent Rainbow Gatherings could be considered.

#### Actions

ECDC is monitoring this outbreak through EPIS FWD and through epidemic intelligence. ECDC published a [news item](#) on 15 September 2017.

### Chikungunya - Europe - 2017

Opening date: 15 September 2017

Latest update: 29 September 2017

#### Epidemiological summary

The two events described below in France and in Italy are two distinct events. There is epidemiological and microbiological evidence highlighting that the clusters in France and in Italy are not related.

On 11 August 2017, France reported an outbreak of autochthonous chikungunya cases in the Var department, southern France through the Early Warning and Response System (EWRS). As of 21 September, France has reported nine cases (seven confirmed and two probable) being part of a cluster in Cannel-des-Maures. There are seven men and two women between 33 and 77 years old. Eight of the cases live in Cannel-des-Maures and one lives in a neighbouring commune (i.e. Brignoles). On 20 September, France reported a new cluster of two confirmed cases in Taradeau commune, which is 13 kilometres away from Cannel-des-Maures. Onset of symptoms were between 4 and 10 September 2017. There is an epidemiological link between the cases in Taradeau and Cannel-des-Maures, indicating that the two clusters are related. As published in the Eurosurveillance article "[Preliminary report of an autochthonous chikungunya outbreak in France, July to September 2017](#)" from 28 September, the virus circulating in France belongs to a East Central South African (ECSA) sub-lineage that includes isolates from the Central African region (e.g. Gabon, Republic of Congo). The virus isolated from the index patient is carrying the E1-A226V mutation. Full genome analysis is ongoing and the sequence will be submitted to GenBank.

As of 22 September, Italy reported 102 autochthonous chikungunya cases in the Lazio region: Anzio (75), Rome (24) and Latina (3). The media is reporting one case in the city of Formigine, Emilia-Romagna region and one case in Castelpiano city, Marche region. Both of them had a recent travel history to Anzio prior onset of symptoms. As published in the Eurosurveillance article "[Detection of a chikungunya outbreak in Central Italy, August to September 2017](#)" from 28 September, the virus circulating in Italy belongs to the East Central South African (ECSA) lineage and show 100% similarity to a strain involved in an ongoing epidemic in Pakistan. The virus isolated does not carry the E1-A226V mutation. The outbreak sequence is available in GenBank.

**Sources:** [Lazio Region](#) | [media](#) | [Lazio region](#) | [France ARS PACA](#) | [France ARS PACA](#)

**ECDC links:** Rapid risk assessment on [cluster of autochthonous chikungunya cases in France](#) | Rapid risk assessment on [clusters of autochthonous chikungunya cases in Italy](#)

## ECDC assessment

The two outbreaks in France and Italy are unrelated and result from separate introductions of the virus, likely from Africa and from Asia respectively. Having concurrent, distinct outbreaks of chikungunya in France and Italy highlights that the environmental conditions in 2017 are favourable for the local transmission of introduced chikungunya virus strains.

The detection of a new cluster in France, with epi-link to Cannel-des-Maures, is not unexpected. Response measures, including vector control, are being implemented. The fact that the strain harbours the E1-A226V mutation may explain the relative greater number of autochthonous cases observed this year compared to the 2010 outbreak in the same region (i.e. two cases reported in 2010). The conclusions of the latest ECDC rapid risk assessment published on 24 August 2017 on the "Cluster of autochthonous chikungunya cases in France" remain valid.

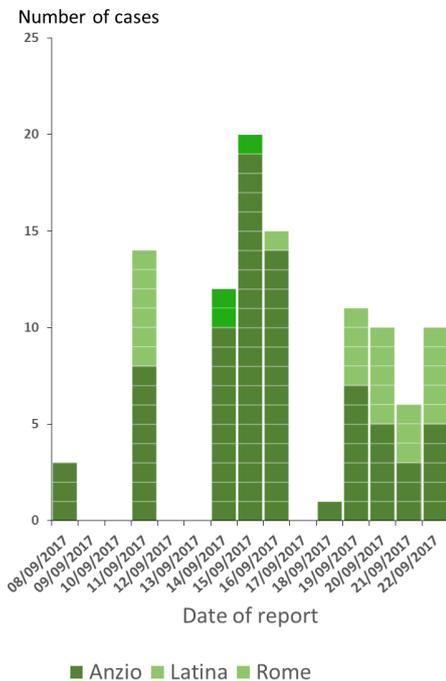
In Italy, in areas where *Aedes albopictus* is established and where the environmental conditions are suitable, more cases might be identified in the near future. The likelihood of further transmission in the Lazio region is considered to be high. The fact that the strain does not carry the E1-A226V mutation would indicate a relative lower vector competence of *Aedes albopictus* for that strain. The conclusions of the latest ECDC rapid risk assessment published on 13 September 2017 on the "Cluster of autochthonous chikungunya cases in Italy" remain valid.

## Actions

ECDC has published a [rapid risk assessment on the cluster of autochthonous chikungunya cases in France](#) on 24 August 2017 and a [rapid risk assessment on the clusters of autochthonous chikungunya cases in Italy](#) on 14 September 2017.

## Autochthonous chikungunya cases by date of report in Italy, 8 - 22 September 2017

ECDC



## West Nile virus – Multistate (Europe) – Monitoring season 2017

Opening date: 30 May 2017

Latest update: 29 September 2017

## Epidemiological summary

Since the beginning of the 2017 transmission season and as of 28 September 2017, Italy has reported 49 cases, Greece has reported 47 human cases, Romania 45 cases, Hungary 16 cases and Austria has reported four cases. In addition, Serbia has reported 36 cases, and Israel has reported nine cases. Fifteen deaths due to West Nile fever have been reported since the start of the transmission season: Romania reported seven, Greece reported five, Hungary, Italy and Serbia reported one. In equids, Member States reported 88 West Nile fever cases through ADNS: 73 in Italy, 12 in Greece and three in Hungary.

ECDC link: [ECDC West Nile fever web page](#) | [ECDC atlas](#) | [TESSy](#)

Source: [ADNS](#)

ECDC reports on this threat on a weekly basis during the West Nile season.

## ECDC assessment

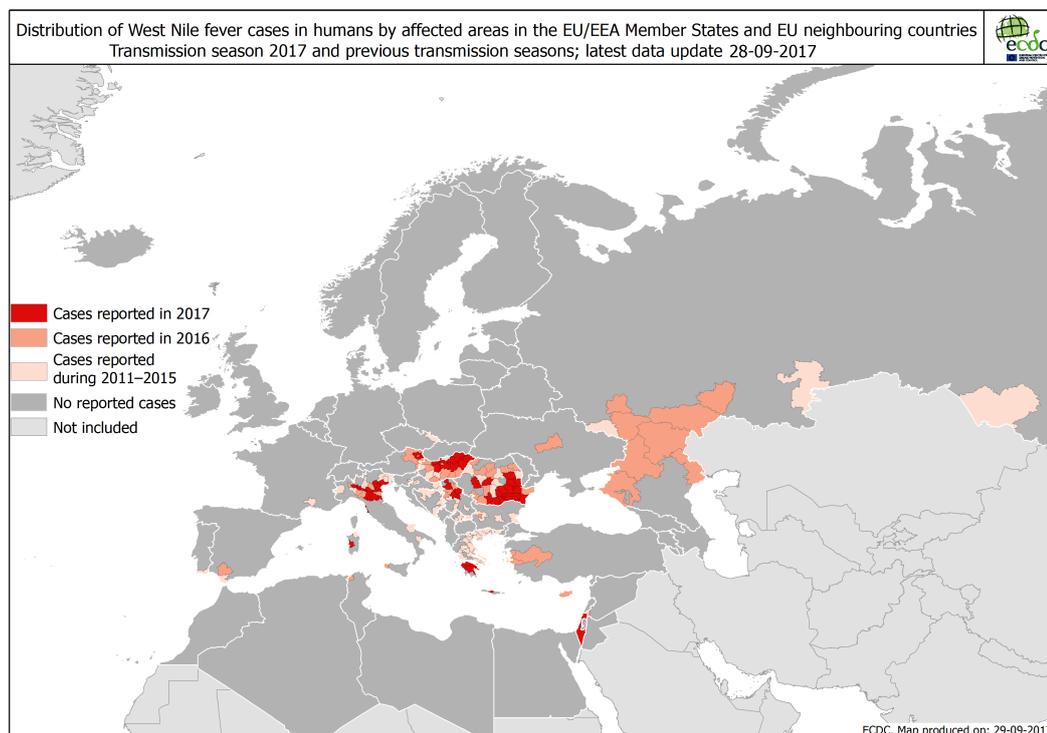
The current West Nile fever epidemiological situation is consistent with observations of seasonal virus transmission from previous years. According to the [Commission Directive 2014/110/EU](#), prospective donors should be deferred for 28 days after leaving a risk area of locally-acquired West Nile virus unless an individual nucleic acid test (NAT) is negative.

## Actions

Since 2011, ECDC has been producing weekly maps displaying the areas (NUTS 3 level) where human West Nile fever cases are detected during the transmission season. The aim of these maps is to inform blood safety authorities of West Nile fever-affected areas to support the implementation of the blood safety directive.

## Distribution of human West Nile fever cases by affected areas as of 28 September.

ECDC



## Travel-associated Legionnaires' disease – Dubai, UAE – 2016/2017

Opening date: 10 November 2016

Latest update: 29 September 2017

### Epidemiological summary

As of 26 September 2017, 14 EU/EEA/EFTA countries have reported 78 TALD cases with onset of symptoms since 1 October 2016 and with travel history to Dubai within two to ten days prior to illness. Cases were reported by the UK (36), Sweden (8), Germany (7), the Netherlands (7), France (6), Denmark (5), Spain (2), Austria (1), Belgium (1), the Czech Republic (1), Hungary (1), Ireland (1), Italy (1) and Switzerland (1). Sixty-nine cases are associated with commercial accommodation sites and nine with private accommodation sites. Sixteen cases spent time in another location in the UAE or in a country other than their home country during their incubation period. Two cases were reported as fatal. All cases are laboratory confirmed. Nine cases had their infection further characterised through sequence base typing: five strains are identified as *Legionella pneumophila* serogroup 1 sequence type 616 and one as *Legionella pneumophila* serogroup 1 sequence type 2382. Sequence type 616 is uncommon in Europe and has been associated with other cases of Legionnaires' disease returning from Dubai in previous years, while sequence type 2382 is the first such identification worldwide and appears to be closely-related to type 616 (personal communication, ELDSNet network). One strain has been characterised as *Legionella pneumophila* serogroup 2-14 sequence type 1327 and two strains have been characterised as *Legionella pneumophila* serogroup 13 sequence type 1327.

**ECDC links:** [Legionnaires' disease web page](#) | First update of [Rapid Risk Assessment Increase of Legionnaires' disease in EU travellers returning from Dubai since October 2016 – 21 September 2017](#)

### ECDC assessment

ECDC observed a significant increase in the number of cases of TALD in EU travellers returning from Dubai over the period October 2016 to May 2017 that could not be accounted for by the increase in travel patterns from the EU. The return to the baseline level of TALD in the most recent two months suggests that the measures implemented by the UAE were effective in containing this outbreak. However, the months of October and November were associated with the highest numbers of TALD notifications over the last few years, particularly in 2016, and additional cases are expected in the coming months.

### Actions

ECDC is monitoring this event through ELDSNet. ECDC is in contact with EU Member States, the ELDSNet network, World Health

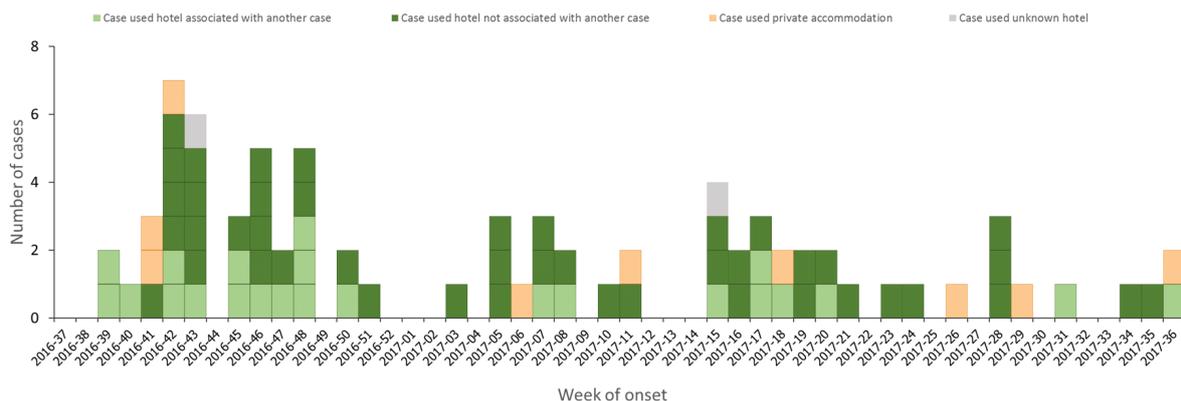
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Organization and the United Arab Emirates to share information.

ECDC published the [first update of the rapid risk assessment](#) 'Increase of Legionnaires' disease in EU travellers returning from Dubai since October 2016' on 21 September 2017.

## Distribution of travel-associated Legionnaires' disease cases with history of stay in Dubai, United Arab Emirates, by week of onset 37-2016 and 36-2017, EU/EFTA Member States

ELDSNet



## Communicable disease risks – Hurricane Irma – 2017

Opening date: 7 September 2017

Latest update: 29 September 2017

### Epidemiological summary

In Haiti, during the week 2017-37, authorities reported 329 cholera suspect cases. This is an increase of 18% compared with week 2017-36 (1 - 9 September) when 279 cases were reported. The main affected province is Artebonite.

However, cholera is endemic in Haiti and this period of the year corresponds to the beginning of the cholera season, which in 2014 to 2016 was between weeks 36 and 40. According to media reports, 112 deaths linked to Hurricane Irma have been

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reported in the Caribbean and Florida.

**Sources:** [NOAA](#) | [media](#) | [ECHO](#) | [Haiti MSPP](#) | [media](#)

### ECDC assessment

As a result of the hurricane, there is an increased risk of multiple disease outbreaks, including outbreaks of acute watery diarrhoea, vaccine-preventable diseases, leptospirosis, vector-borne diseases and food-related outbreaks. The situation is particularly critical in areas with low vaccination coverage and where displaced populations face basic living conditions due to flooding and heavy rains.

### Actions

ECDC circulated a [rapid risk assessment](#) to Member States and the European Commission on 8 September 2017. ECDC has sent an offer for the possibility to deploy EPIET fellows if needed.

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