

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

Chikungunya - Europe - 2017

Opening date: 15 September 2017

Latest update: 22 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.

There is epidemiological or microbiological evidence highlighting that the clusters in France and in Italy are not related.

→ Update of the week

Since the last CDTR publication on 15 September, [France](#) reported a new cluster with two confirmed cases. According to [media](#) reports, this cluster is in Taradeau municipality, which is 13 kilometres away from Cannet-des-Maures where the first cluster was reported.

Since the last CDTR, [Italy](#) reported 75 additional confirmed cases from three cities in the Lazio region: Rome, Anzio and Latina.

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

Opening date: 30 May 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 14 and 21 September 2017, Italy reported 20 cases, of which two cases were reported in a newly affected area. Romania reported 17 cases, in which one area is newly affected. Four cases in previously affected areas were reported by Hungary. Greece reported four cases of which two areas are newly affected. One domestically acquired case in Greece has an unknown place of infection. Romania reported one death due to West Nile fever.

In addition, Italy has reported ten West Nile fever equine cases and Hungary reported one equine case through the Animal Disease Notification System (ADNS) of the European Commission.

Typhoid fever outbreak - mass gathering - Italy - 2017

Opening date: 11 September 2017

Latest update: 22 September 2017

On 8 September 2017, France reported several cases of typhoid fever among unvaccinated participants of 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 19 September Germany reported through the Epidemic Intelligence Information System for Food- and Waterborne Diseases (EPIS-FWD) an additional case of typhoid fever related to the Rainbow Gathering. The 28-year-old male had onset of symptoms on 3 September.

Malaria - Europe - 2017

Opening date: 11 September 2017

Latest update: 22 September 2017

In 2017, several EU Member States reported separate events clustered in time of locally-acquired malaria cases due to *Plasmodium falciparum* or *Plasmodium vivax*.

Most of the events occurred in July and August 2017, except for the the event related to malaria cases with *P. vivax* in Greece that started in May 2017.

→Update of the week

On 20 September 2017, ECDC published a rapid risk assessment "[Multiple reports of locally-acquired malaria infections in the EU](#)".

Non EU Threats

Malaria – Cape Verde- 2017

Opening date: 10 August 2017

Latest update: 22 September 2017

In July 2017, Cape Verde reported a sudden increase in the number of malaria cases. According to WHO, Cape Verde is categorised as having a 'very limited risk of malaria transmission area', with limited local transmission from September to November, coinciding with the rainy season.

→Update of the week

According to media reports, on 15 September 2017, a 40-year-old man died in the city of Praia from malaria. If the case is confirmed, it would be the first death linked to autochthonous malaria reported in Cape Verde in 2017. On 20 September, the media reported 230 autochthonous cases in the city of Praia. This would represent an increase by 29 cases since the last official report on 10 September 2017.

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

Opening date: 10 November 2016

Latest update: 22 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

Three additional cases were reported in the last week from Italy, Spain and the UK. Cases were associated with one private accommodation site and two commercial accommodation sites located in three different administrations.

Communicable disease risks – Hurricane Irma – 2017

Opening date: 7 September 2017

Latest update: 22 September 2017

As of 21 September 2017, the media has reported at least 68 deaths across all the affected areas and devastation in Anguilla, Barbuda, the British Virgin Islands, St. Martin/St. Maarten, the US Virgin Islands and Turks and Caicos. There have been indirect deaths reported due to the consequences of the hurricane, with at least eight deaths in Florida, USA.

→Update of the week

As of 21 September 2017, the USA National Oceanic and Atmospheric Administration (NOAA) categorised hurricane Maria to category 3 in the Saffir-Simpson hurricane wind scale, with maximum sustained winds near 185km/h. The Turks and Caicos, South-eastern Bahamas and parts of Dominican Republic areas are on hurricane alert. According to media reports, the Dominica island has been devastated and seven deaths are reported. In addition, two deaths have been reported in Guadeloupe island.

The area is vulnerable to new climatological threats as infrastructures have not recovered from hurricane Irma. Hence additional damage and casualties are predicted as hurricane Maria passes by the area.

Sources: [NOAA](#), [media](#), [ECHO](#)

II. Detailed reports

Chikungunya - Europe - 2017

Opening date: 15 September 2017

Latest update: 22 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 through the Early Warning and Response System (EWRS) an outbreak of autochthonous chikungunya cases in the Var department, southern France. As of 21 September, France has reported nine cases (seven confirmed and two probable) being part of a cluster in Cannet-des-Maures. There are seven men and two women between 33 and 77 years old. Eight of the cases live in Cannet-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 Cannet-des-Maures. The two cases are from the same family and aged 25 and 65 years. Onset of symptoms were on 7 and 9 September. The spatio-temporal proximity of the clusters would indicate that the two clusters are related.

As of 21 September, Italy reported 92 autochthonous chikungunya cases in the Lazio region: Anzio (70), Rome (19) and Latina (3). The media are reporting one case in the city of Formigine, Emilia-Romagna region and one case in Castelplanio city, Marche region. Both of them had a recent travel history to Anzio prior onset of symptoms.

The sequence of the first virus isolate in [Italy](#) has (CHIKV/ITA/Lazio-INMI1-2017) will be available in GenBank.

Sources: [Lazio Region](#) | [media](#) | [Lazio region](#) | [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

Having concurrent, distinct outbreaks of chikungunya in France and Italy highlights that in 2017 the environmental conditions were favourable for the local spread of introduced chikungunya virus strains.

The detection of a new cluster in France, in a different location than the previously reported cluster, is not unexpected. Investigations are on-going and response measures, including vector control, are being implemented. The spatio-temporal proximity of the clusters would indicate that the two clusters are related. 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.

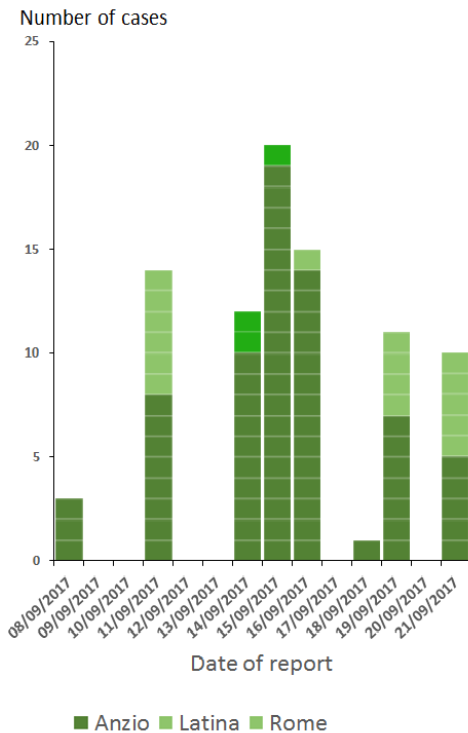
In Italy, in areas where *Aedes albopictus* is established and where the environmental conditions are suitable, it is expected that more cases will be identified in the near future. The likelihood of further transmission in the Lazio region is high. The conclusions of the latest ECDC rapid risk assessment 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 - 21 September 2017

ECDC



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

Opening date: 30 May 2017

Epidemiological summary

Since the beginning of the 2017 transmission season and as of 21 September 2017, Italy has reported 47 cases, Greece has reported 45 human cases, Romania 39 cases, Hungary 14 cases and Austria has reported two cases. In addition, Serbia has reported 28 cases, and Israel has reported nine cases.

In equids, Member States reported 79 West Nile fever cases through ADNS: 65 in Italy, 11 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

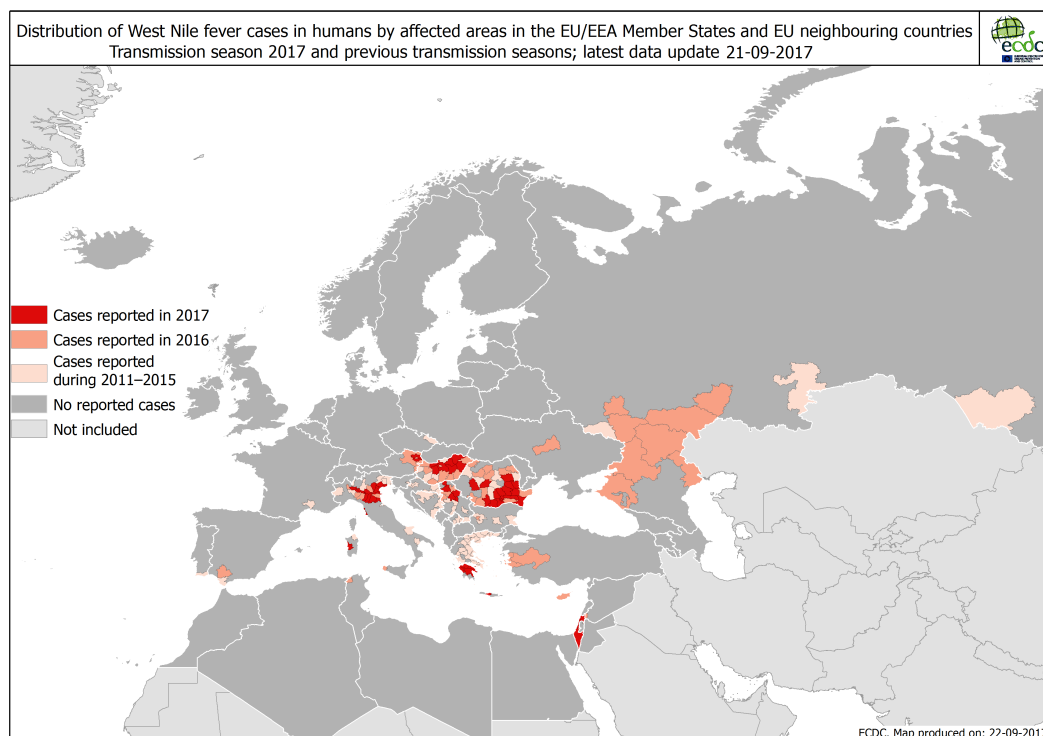
The current West Nile fever epidemiological situation is consistent with observations of seasonal virus transmission from previous years. According to the [Commission Directive 2014/110/EU](#), prospective donors should be deferred for 28 days after leaving a risk area of locally-acquired West Nile virus 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 21 September.

ECDC



Typhoid fever outbreak - mass gathering - Italy - 2017

Opening date: 11 September 2017

Latest update: 22 September 2017

Epidemiological summary

On 8 September 2017, France reported three confirmed cases of typhoid fever among unvaccinated participants of 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 21 September, several EU countries reported additional cases related to this mass gathering: France (three confirmed cases), Germany (two confirmed cases), the Czech Republic (one confirmed case), Croatia (one confirmed and three probable cases) and Italy (one confirmed case).

Austria, Denmark, Finland, Hungary, Ireland, the Netherlands, Norway, Slovenia 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, eight confirmed and three possible 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

6/12

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.

Malaria - Europe - 2017

Opening date: 11 September 2017

Latest update: 22 September 2017

Epidemiological summary

Greece

As of 17 August 2017, Greece reported five autochthonous cases of *P. vivax* malaria acquired via vector-borne transmission following a likely exposure in the regions of Dytiki Ellada in West Greece for four cases and Sterea Ellada in Central Greece for one case [6]. Greece reports that these cases resulted from a local transmission following recent introduction of *P. vivax* in the area (introduced cases). The dates of onset of the cases range between 2 May and 22 July 2017. In addition, Greece reported one locally-acquired case of *P. falciparum* in the region of Ipeiros, in north-west Greece, with date of onset of symptoms between 17 and 23 July 2017. The case, who has no travel history to a malaria-endemic area, was hospitalised for a non-infectious medical condition in a ward where another patient was treated for *P. falciparum* malaria. The most likely place of exposure for this particular case was a healthcare facility but it was not possible to determine the exact mode of transmission (mosquito vector or of iatrogenic origin). The investigation excluded transmission through blood transfusion, but instead suggested a nosocomial transmission, either mosquito-borne within the healthcare facility or of iatrogenic origin. No locally acquired malaria cases were reported in the area.

Italy

On 5 September, Italy reported a fatal case of malaria [33]. The case was a four-year-old girl with no travel history to a malaria-endemic country. She was admitted on 13 August 2017 to a hospital in the Veneto region and diagnosed with diabetes mellitus. After returning from the Veneto region, she was admitted to a Trento hospital for her diabetes (16 to 21 August) and later consulted a pharyngitis on 31 August 2017.

On 2 September, she was admitted to hospital again and diagnosed with *P. falciparum* malaria. She was subsequently transferred to the tropical diseases reference centre in Brescia where she died on 4 September. Epidemiological investigations showed that two patients infected with *P. falciparum* were hospitalised in the same ward during her stay in the Trento hospital. An investigation in the Trento hospital did not identify any breaches of medical procedures that could result in an iatrogenic transmission. Entomological investigations in the Trento area did not reveal the presence of *Anopheles* mosquitoes. Entomological surveys in Bibione, where the girl spent her holidays, were conducted. Molecular sequencing of the *Plasmodium* strain from the girl and from the two children hospitalised concomitantly is ongoing.

France

On 7 September, France reported two locally-acquired cases of malaria in the department of Allier in the Auvergne-Rhône-Alpes region of central France. Both cases attended a wedding that took place between 11 and 16 August 2017 in Moulins, Allier department, France. On 30 August 2017, the first case was diagnosed after admission to hospital in the southwest of France for fever, chills and sweats evolving since 26 August. The patient did not travel abroad and had no risk factors for induced malaria. The only recent trip was to Moulins and its surroundings to attend the wedding.

On 1 September, a second case who attended the same wedding was diagnosed upon returning home. The case had onset of symptoms on 26 August 2017 and had neither exposure to induced malaria nor a recent travel history to a malaria-endemic area. The Regional Health Agency of Auvergne-Rhône-Alpes implemented active case finding in the neighbouring laboratories and hospitals. None of the wedding attendees reported a recent travel history to a malaria-endemic country or symptoms compatible with malaria. However, an imported case of *P. falciparum* malaria from Burkina Faso was identified to have stayed in Moulins and

7/12

its surroundings for several days within the two weeks before the wedding. Entomological investigations conducted in the areas visited by the imported case and autochthonous cases did not find evidence of the presence *Anopheles plumbeus*, a potential competent vector of *P. falciparum*. The French National Reference Centre for Malaria is gathering samples for molecular typing to assess the link between the imported and the two autochthonous cases.

The United Kingdom ex. the northern part of Cyprus

On 8 September, the United Kingdom reported (through the Early Warning and Response System) three cases of *P. vivax* malaria in travellers returning from Esentepe, the northern part of Cyprus. Two of the cases were siblings aged twelve years that travelled independently from the third case. The three cases stayed in the northern part of Cyprus for two to three weeks in August and developed symptoms on 29 August. They were laboratory confirmed upon returning to the UK.

ECDC link: [ECDC malaria factsheet](#)

Sources: [Italian blood safety authorities](#) | [Hellenic public health agency](#)

ECDC assessment

Four EU Member States have reported the occurrence of malaria cases due to *P. falciparum* and *P. vivax* acquired in the EU. Greece has reported local transmission of *P. vivax* since May 2017 while other transmission events occurred in July 2017. The risk of malaria spread in the EU following these events remains very low.

Actions

ECDC published a rapid risk assessment "[Multiple reports of locally-acquired malaria infections in the EU](#)" on 20 September 2017.

Malaria – Cape Verde- 2017

Opening date: 10 August 2017

Latest update: 22 September 2017

Epidemiological summary

According to media reports, on 15 September 2017, a 40-year-old man died in the city of Praia from malaria. If the case is confirmed, it would be the first death linked to autochthonous malaria reported in Cape Verde in 2017. On 20 September, the media reported 230 autochthonous cases in the city of Praia. This would represent an increase by 29 cases since the last official report on 10 September 2017. The epicentre of the outbreak is located in the capital city of Praia in Santiago Island. According to WHO, the causative agent is *Plasmodium falciparum*.

In July 2017, Cape Verde reported a sudden increase in the number of malaria cases. According to WHO, Cape Verde is categorised as a 'very limited risk of malaria transmission area', with limited local transmission from September to November, coinciding with the rainy season. In 2017, as of 10 September, 201 cases have been reported. The epicentre of the outbreak is located in the capital city of Praia in Santiago Island. The UK National Travel Health Network and Centre (NaTHNaC) updated the travel recommendation on 5 September, stating that there is a 'very low' risk of malaria on the Island of Santiago (Sao Tiago) except in the city of Praia where the risk has risen to 'low'. For all travellers, awareness of risk and bite avoidance is recommended. Travellers to the city of Praia who are at higher risk of malaria (such as long-term travellers, or those who are at risk of severe complications from malaria, e.g. pregnant women, infants and young children, the elderly, and travellers who do not have a functioning spleen) should consider taking chemoprophylaxis with atovaquone-proguanil, doxycycline or mefloquine.

Background: The risk of malaria for Cape Verde is considered as type A (very limited risk of malaria transmission) according to WHO. The most recent major outbreak was reported in 1999 (140 cases) and 2001 (95 cases). In the last 10 years, autochthonous cases in Praia have not exceeded 30 cases.

ECDC link: [ECDC malaria page](#)

Sources: [Cape Verde Ministry of Health](#) | [WHO](#) | [NaTHNaC](#) | [Portugal](#) | [media](#) | [media](#)

ECDC assessment

The increase of autochthonous malaria cases in Cape Verde at the beginning of the rainy season (August to November) is of concern. More cases are likely to be reported in the coming weeks. Member States should consider to reinforce malaria prevention measures for travellers.

Actions

ECDC is monitoring this event through epidemic intelligence.

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

Opening date: 10 November 2016

Latest update: 22 September 2017

Epidemiological summary

Three additional cases were reported in the last week from Italy, Spain and the UK. Cases were associated with one private accommodation site and two commercial accommodation sites located in three different administrations.

As of 19 September 2017, 14 EU/EEA/EFTA countries have reported 77 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 (4), Spain (2), Austria (1), Belgium (1), the Czech Republic (1), Hungary (1), Ireland (1), Italy (1) and Switzerland (1). Sixty-eight 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.

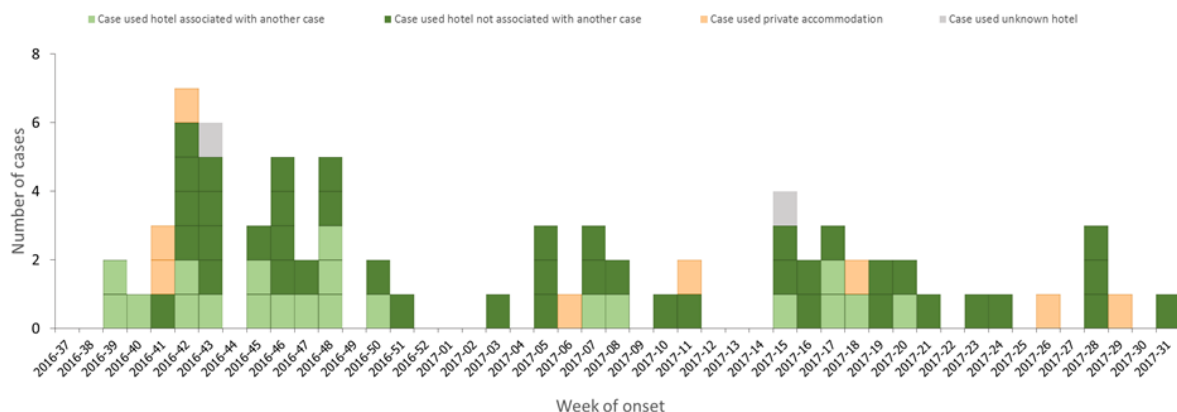
Actions

ECDC is monitoring this event through ELDSNet. ECDC is in contact with EU Member States, the ELDSNet network, World Health 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 - 31/2017, as reported to ELDSNet by 19 September 2017 (n=74 cases)

ELDSNet



Communicable disease risks – Hurricane Irma – 2017

Opening date: 7 September 2017

Latest update: 22 September 2017

Epidemiological summary

No communicable disease outbreaks have been detected as of 21 September.

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

10/12

flooding and heavy rains. In addition, access to basic healthcare has been disrupted in some of the affected areas.

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.