

This weekly bulletin provides updates on threats monitored by ECDC.

NEWS

Recommended composition of influenza virus vaccines for use in the 2018-2019 northern hemisphere influenza season

The 2018 to 2019 influenza season is approaching Europe. The best measure to prevent influenza is vaccination. According to [WHO](#), quadrivalent vaccines for use in the 2018 to 2019 northern hemisphere influenza season contain the following:

- an A/Michigan/45/2015 (H1N1)pdm09-like virus
- an A/Singapore/INFIMH-16-0019/2016 (H3N2)-like virus
- a B/Colorado/06/2017-like virus (B/Victoria/2/87 lineage); and
- a B/Phuket/3073/2013-like virus (B/Yamagata/16/88 lineage).

It is recommended that the influenza B virus component of trivalent vaccines for use in the 2018 to 2019 northern hemisphere influenza season be a B/Colorado/06/2017-like virus of B/Victoria/2/87-lineage.

A(H1N1)pdm09 - Almost all of the 2017 to 2018 circulating A(H1N1)pdm09 viruses were antigenically similar to vaccine virus A/Michigan/45/2015.

A(H3N2) - Almost all of the 2017 to 2018 circulating A(H3N2) viruses belonged to haemagglutinin (HA) phylogenetic clade 3C.2a and the majority to subclade 3C.2a2. The 2018 to 19 vaccine includes an A/Singapore/INFIMH-160019/2016-like virus that belongs to the 3C.2a1 subclade and is considered antigenically similar to the circulating viruses.

B/Victoria lineage - B/Victoria lineage is included in the trivalent vaccine for the 2018-2019 influenza season. The recommended vaccine virus B/Colorado/06/2017 belongs to clade 1A and carries the characteristic two amino acid deletions K162 and N163 in HA. Although the proportion of the new deletion variant viruses that are all antigenically distinct from the previous vaccine components remains low, a substantial and increasing proportion of circulating B/Victoria viruses carries this deletion.

B/Yamagata lineage - Most of the B/Yamagata lineage viruses that circulated during the 2017-2018 influenza season were antigenically similar to B/Phuket/3073/2013 and the same component was retained for the quadrivalent 2018-2019 vaccine. Trivalent vaccines containing a B/Victoria lineage virus may provide some cross-protection against B/Yamagata lineage viruses, similar to the 2017 to 2018 season.

As all influenza (sub)types co-circulated globally during the past influenza season, it is not feasible to predict the proportions of circulating viruses for the upcoming season.

More information from WHO: [Recommended composition of influenza virus vaccines for use in the 2018-2019 northern hemisphere influenza season - full report](#) and [Questions and answers - Recommended composition of influenza virus vaccines](#)

Endemic typhus in Los Angeles, California, USA

Between July and September 2018, the [Los Angeles County Department of Public Health](#) identified nine cases of flea-borne typhus associated with downtown Los Angeles. The cases have a history of living or working in downtown Los Angeles and six of them have reported periods of homelessness or having lived in interim housing facilities in the area. All cases were hospitalised, and no deaths have occurred.

As of 8 October, according to [media](#) quoting health authorities, an unusual increase in flea-borne typhus has been reported in Los Angeles County, with 59 cases. Nine cases were identified in [downtown Los Angeles](#), 20 in the [Pasadena city](#), and in 12 in Long Beach.

Flea-borne typhus, also known as murine or endemic typhus, is a disease transmitted by fleas infected with *Rickettsia typhi* or *Rickettsia felis*. Severe complications can occur, resulting in lengthy hospitalisation and, in rare instances, death. Endemic typhus is not transmissible from person-to-person.

Flea-borne typhus is endemic in Los Angeles County and cases are detected each year. Most cases occur in the summer and autumn months. In recent years, the average number of cases reported has doubled to nearly 60 cases per year. However, geographic clusters the size of the current downtown Los Angeles cluster are unusual.

According to IATA data, around 200 000 travellers flew from the EU to Los Angeles International Airport in October 2017. Despite this significant number of travellers, the risk for EU citizens remains very low as the likelihood of close contact with stray animals and the at-risk group is very low. In the event of infection timely adequate antibiotic treatment is available. ECDC will monitor this event through Epidemic Intelligence.

I. Executive summary

EU Threats

New! Influenza – Multistate (Europe) – Monitoring season 2018 – 2019

Opening date: 8 October 2018

Latest update: 12 October 2018

Influenza transmission in Europe shows a seasonal pattern, with peak activity during the winter months.

→ Update of the week

This is the first weekly report of the 2018 to 2019 influenza season.

New! Autochthonous dengue – Spain – 2018

Opening date: 10 October 2018

Latest update: 12 October 2018

On 9 October 2018, the Spanish Ministry of Health reported two confirmed autochthonous dengue cases in Spain.

West Nile virus - Multistate (Europe) - Monitoring season 2018

Opening date: 30 May 2018

Latest update: 12 October 2018

During the West Nile virus transmission season (expected to be between June and November), ECDC monitors the occurrence of West Nile virus infections in EU/EEA Member States and EU neighbouring countries and publishes weekly epidemiological updates to inform blood safety authorities of areas at NUTS 3 (Nomenclature of Territorial Units for Statistics 3) or GAUL 2 (Global Administrative Unit Layers 2) level where there is ongoing virus transmission.

→Update of the week

Between 5 and 11 October 2018, EU Member States reported 85 human West Nile virus (WNV) infections in Italy (41), Romania (12), Greece (11), France (6), Hungary (6), Bulgaria (5), Austria (3) and the Czech Republic (1). EU neighbouring countries reported 48 cases in Israel (29) and Serbia (19).

In two areas (NUTS 3 level), human cases were reported for the first time in one new area in France and one in Bulgaria. All other human cases were reported from areas that have been affected during previous transmission seasons. This week, 12 deaths were reported by Italy (7), Romania (2), Serbia (2) and Greece (1).

In the same week, 13 outbreaks among equids were reported by Hungary (5), France (3), Italy (2), Germany (1), Greece (1) and Spain (1).

In September, a 31-year-old veterinarian was diagnosed with suspected WNV infection after performing an autopsy on a newly deceased owl (great grey owl, *Strix nebulosa*) found in a wildlife park near Poing, Ebersberg, Bavaria, Germany. WNV was detected in the owl by PCR in tissue samples recovered during the autopsy. In the veterinarian, positive serological tests with IgM antibodies (IF titre 1:80) strongly indicated WNV infection. Further tests of follow-up samples from the patient to confirm diagnosis are pending.

WNV infections acquired after occupational exposure by necropsy on birds (blue jay, [US, 2002](#)), mice (US, 2002) and horses ([South Africa, 2008](#)) have been reported in literature and are not unexpected. It is important to note that in this case, transmission by mosquitoes can be excluded.

Measles – Multistate (EU) – Monitoring European outbreaks

Opening date: 9 February 2011

Latest update: 12 October 2018

Measles cases in the EU/EEA primarily occur in unvaccinated populations in both adults and children. Large outbreaks with fatalities are ongoing in countries that had previously eliminated or interrupted endemic transmission.

→Update of the week

Since the previous Communicable Disease Threats Report (CDTR) published on 14 September 2018, updates are provided for 22 EU/EFTA countries: Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Romania, Spain, Sweden, Switzerland and United Kingdom (UK).

In 2018 and as of 5 October, most of the cases in the EU were reported from Romania (5 088), France (2 702), Greece (2 289), and Italy (2 248). Thirty-three deaths have been reported in 2018 from Romania (22), Italy (6), France (3) and Greece (2), an increase of 2 since the previous report.

Outside EU/EFTA countries, Ukraine is experiencing the continuation of the largest outbreak, with over 31 000 cases reported in 2018, including 14 deaths. A large ongoing outbreak has also been reported in Serbia, with 5 741 cases and 15 deaths. Ongoing outbreaks are also reported in Israel, the Americas and Mauritius, while cases of measles are also reported in Russia.

The monthly measles report published in the CDTR provides the most recent data on measles cases and outbreaks based on the data reported on national authority websites or through media reports. It is supplementary to ECDC's [monthly measles and rubella monitoring report](#) based on data routinely submitted by 30 EU/EEA countries to The European Surveillance System (TESSy). The data presented in both monthly reports may differ.

Dengue – France, Réunion – 2018

Opening date: 13 March 2018

Latest update: 12 October 2018

Since the beginning of 2018, the island of Réunion, a French department in the Indian Ocean, has seen a significant increase in dengue cases.

→Update of the week

Since the previous CDTR update on 28 September 2018, Réunion reported 42 additional cases of dengue, of which 11 were detected between 24 and 30 September 2018.

Non EU Threats

Ebola virus disease - tenth outbreak - Democratic Republic of the Congo - 2018

Opening date: 1 August 2018

Latest update: 12 October 2018

On 1 August 2018, the Ministry of Health of the Democratic Republic of the Congo (DRC) declared the 10th outbreak of Ebola virus disease in the country. The outbreak affects North Kivu and Ituri Provinces in the northeast of the country close to the border with Uganda.

→Update of the week

Over the past week, the Ministry of Health of the Democratic Republic of the Congo has reported 35 additional cases in Beni (29), Butembo (4) and Masereka (2).

As of 10 October 2018, there have been 200 Ebola virus disease cases (165 confirmed, 35 probable), including 125 deaths (90 of which were confirmed cases), since the beginning of the outbreak.

Uganda has intensified preparedness activities in all border and district surveillance teams in response to alert cases. However, Ebola virus disease has not been found in any alerts from neighbouring provinces and countries.

According to the latest [disease outbreak news](#) from the WHO, as of 11 October 2018, there has been an increasing trend in weekly case incidence. These cases are likely underestimated given expected delays due to security concerns, delays in case reporting and the difficulty of ongoing detection of sporadic cases.

II. Detailed reports

New! Influenza – Multistate (Europe) – Monitoring season 2018 – 2019

Opening date: 8 October 2018

Latest update: 12 October 2018

Epidemiological summary

Week 40, 2018 (1 to 7 October 2018)

Influenza activity was low throughout European.

Influenza viruses were detected sporadically in specimens from persons with respiratory illness presenting to sentinel and non-sentinel surveillance sites.

Both influenza A and B type viruses were detected.

For week 40 in 2018, data from the 19 countries or regions reporting to the EuroMOMO project indicated all-cause mortality to be at expected levels for this time of the year.

Season overview

Due to the diversity of A(H3N2) influenza viruses that circulated during the 2018 southern hemisphere season, WHO recently recommended a change of the A(H3N2) component for inclusion in egg-based seasonal influenza vaccines for use in the 2019 southern hemisphere influenza season. In addition, the influenza B component in trivalent vaccines was changed to a B/Victoria-lineage virus, representing the emergent clade with the amino acid deletions Δ 162-163 in haemagglutinin (HA), similar to the 2018 to 2019 vaccine for the northern hemisphere influenza season. See the full southern hemisphere vaccine composition meeting report [here](#).

ECDC assessment

As expected for this time of year, influenza activity is low in Europe.

Source: [Flu News Europe](#), [EuroMOMO](#)

Actions

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

Recommendations on the composition of the 2018-2019 influenza virus vaccine are available from [WHO](#).

New! Autochthonous dengue – Spain – 2018

Opening date: 10 October 2018

Latest update: 12 October 2018

Epidemiological summary

On 9 October 2018, the Spanish Ministry of Health reported two confirmed autochthonous dengue cases in Spain. Additionally, a third case that showed compatible symptoms is being tested. All cases belong to the same family and had onset of symptoms in late August 2018 after spending time together in municipalities in the Murcia region and Cádiz province during the possible time of infection. All cases fully recovered and had no recent travel history to dengue-affected areas. Active case finding and response activities have been implemented on site.

This is the first documented autochthonous dengue transmission in Spain.

Source: [Spanish Ministry of Health](#), [Murcia Regional Government](#)

ECDC assessment

Isolated cases or small clusters of autochthonous dengue in the south of Spain are not unexpected, as *Aedes albopictus* is present in the area. The current known *Aedes albopictus* distribution as of June 2018 shows that the mosquito is established in Murcia region and introduced in Cádiz province, the possible sites of infection according to the Ministry of Health. Similar occurrences have been documented in Europe in previous years. The risk of further transmission is considered to be low as the weather conditions are expected to become more unfavourable in the coming weeks; active case-finding activities are ongoing. More

information regarding dengue fever and *Aedes albopictus* geographical distribution is available from ECDC's [fact sheet](#) and [mosquito map](#).

Actions

ECDC is monitoring this event through epidemic intelligence. ECDC is producing a rapid risk assessment on autochthonous dengue in Spain in 2018 to be published on 19 October 2018.

West Nile virus - Multistate (Europe) - Monitoring season 2018

Opening date: 30 May 2018

Latest update: 12 October 2018

Epidemiological summary

Between 5 and 11 October 2018, EU Member States reported 85 human West Nile virus (WNV) infections in Italy (41), Romania (12), Greece (11), France (6), Hungary (6), Bulgaria (5), Austria (3) and the Czech Republic (1). EU neighbouring countries reported 48 cases in Israel (29) and Serbia (19).

In two areas (NUTS 3 level), human cases were reported for the first time in one new area in France and one in Bulgaria. All other human cases were reported from areas that have been affected during previous transmission seasons. This week, 12 deaths were reported by Italy (7), Romania (2), Serbia (2) and Greece (1).

In the same week, 13 outbreaks among equids were reported by Hungary (5), France (3), Italy (2), Germany (1), Greece (1) and Spain (1).

In September, a 31-year-old veterinarian was diagnosed with suspected WNV infection after performing an autopsy on a newly deceased owl (great grey owl, *Strix nebulosa*) found in a wildlife park near Poing, Ebersberg, Bavaria, Germany. WNV was detected in the owl by PCR in tissue samples recovered during the autopsy. In the veterinarian, positive serological tests with IgM antibodies (IF titre 1:80) strongly indicated WNV infection. Further tests of follow-up samples from the patient to confirm the diagnosis are pending.

WNV infections acquired after occupational exposure by necropsy on birds (blue jay, [US, 2002](#)), mice (US, 2002) and horses ([South Africa, 2008](#)) have been reported in literature and are not unexpected. It is important to note that in this case, transmission by mosquitoes can be excluded.

In 2018 and as of 11 October 2018, EU Member States have reported 1 402 human cases in Italy (536), Greece (294), Romania (268), Hungary (203), Croatia (45), France (22), Austria (18), Bulgaria (11), Slovenia (3) and the Czech Republic (2). EU neighbouring countries reported 482 human cases in Serbia (369), Israel (110) and Kosovo* (3). To date, 154 deaths due to West Nile virus infection have been reported by Italy (43), Romania (38), Greece (35), Serbia (34), Bulgaria (1), the Czech Republic (1), Hungary (1) and Kosovo* (1).

During the current transmission season, 235 outbreaks among equids have been reported by Italy (122), Hungary (84), Greece (14), France (8), Romania (2), Germany (2), Austria (1), Spain (1) and Slovenia (1).

In accordance with [European Commission Directive 2014/110/EU](#), prospective blood donors should defer for 28 days after leaving an area with evidence of West Nile virus circulation among humans unless the results of an individual nucleic acid test are negative.

*This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the International Court of Justice Opinion on the Kosovo Declaration of Independence.

Publications: [An early start of West Nile virus seasonal transmission: the added value of One Health surveillance in detecting early circulation and triggering timely response in Italy, June to July 2018](#)

[Early start of the West Nile fever transmission season 2018 in Europe](#)

ECDC links: [West Nile fever](#) | [Atlas](#)

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

ECDC assessment

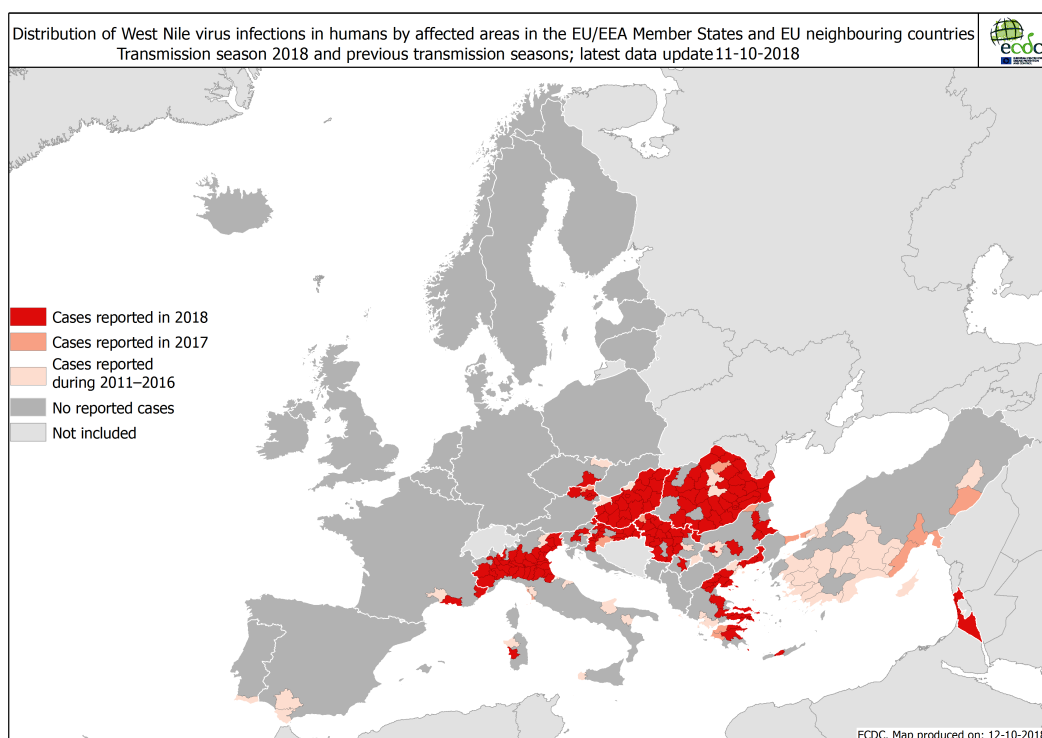
The 2018 transmission season started earlier than usual and higher case numbers have been reported compared with the same period in previous years. This year, Germany detected the country's first autochthonous human West Nile virus infection. All other autochthonous human cases were reported in previously affected countries. Since it is a particularly intense transmission season for West Nile virus, precautionary measures for travellers and residents, mainly elderly and immunocompromised individuals, to affected areas must be highlighted.

Actions

During the transmission season, ECDC publishes [West Nile fever maps](#) together with an epidemiological summary every Friday. ECDC published a rapid risk assessment on the [Early large increase in West Nile virus infections in the EU/EEA and EU neighbouring countries](#) on 13 August 2018 and [the latest epidemiological update](#) on 24 September 2018.

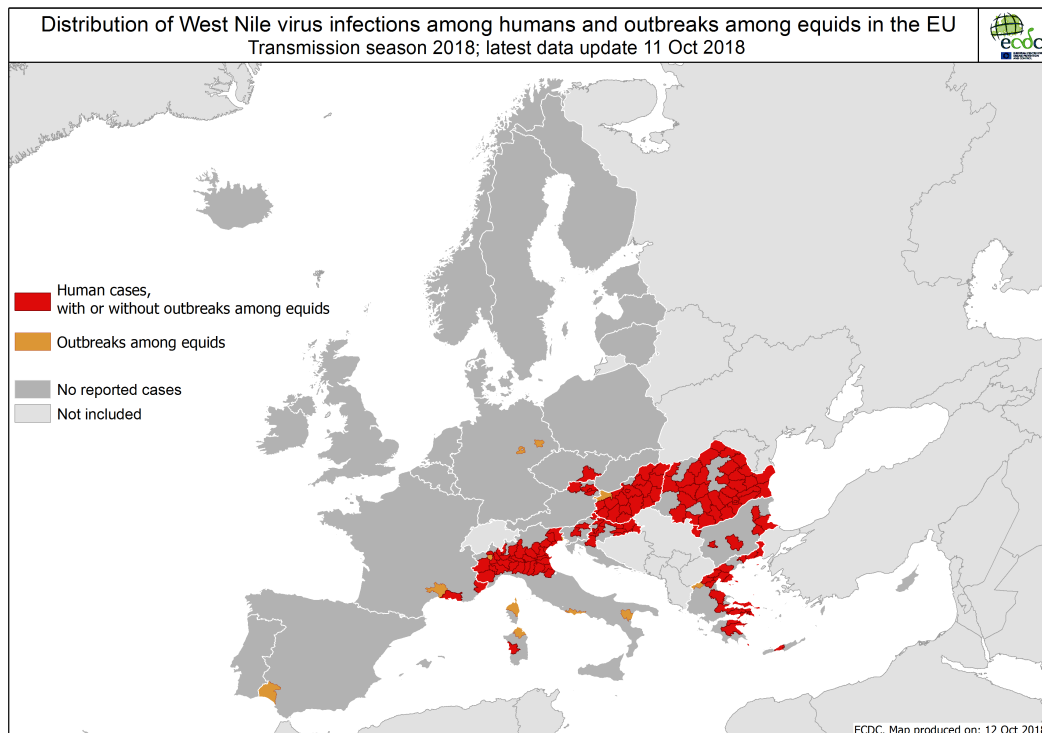
Distribution of human West Nile infections by affected areas as of 11 October 2018.

ECDC



Distribution of West Nile virus infections among humans and outbreaks among equids in the EU as of 11 October 2018.

TESSy and ADNS



Measles – Multistate (EU) – Monitoring European outbreaks

Opening date: 9 February 2011

Latest update: 12 October 2018

Epidemiological summary

Since the previous Communicable Disease Threats Report (CDTR) published on 14 September 2018, updates are provided for 22 EU/EFTA countries: Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Romania, Spain, Sweden, Switzerland and United Kingdom (UK).

In 2018 and as of 5 October, most of the cases in the EU were reported from Romania (5 100), France (2 702), Greece (2 290), and Italy (2 248). Thirty-three deaths have been reported in 2018 from Romania (22), Italy (6), France (3) and Greece (2), an increase of two since the previous report.

Outside EU/EFTA countries, Ukraine is experiencing the continuation of the largest outbreak with over 31 000 cases reported in 2018, including 14 deaths. A large ongoing outbreak has also been reported in Serbia with 5 736 cases and 15 deaths. Ongoing outbreaks are also reported in Israel, the Americas and Mauritius, while cases of measles are also reported in Russia.

The monthly measles report published in the CDTR provides the most recent data on measles cases and outbreaks based on the data reported on national authority websites or through media reports. It is supplementary to ECDC's [monthly measles and rubella monitoring report](#) based on data routinely submitted by 30 EU/EEA countries to The European Surveillance System (TESSy). The data presented in both monthly reports may differ.

Epidemiological summary for EU/EFTA countries with updates since last month:

[Belgium](#) reported 73 cases of measles between January and July 2018, according to the national report in September 2018. In 2017, 367 cases of measles were reported in Belgium. Additionally, 11 cases were reported via TESSy in August.

[Bulgaria](#) reported 8 cases of measles in 2018 as of 7 October 2018. This is one less case than reported in the previous CDTR on 14 September 2018.

The [Czech Republic](#) reported 158 cases of measles in 2018 as of 31 August 2018. As of 14 September 2018, 91 cases of measles

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were reported in Prague.

[Denmark](#) reported one confirmed case of measles on 21 September 2018. The patient was infected while travelling on a flight.

[Finland](#) reported seven cases of measles in 2018 as of 5 October 2018. This is an increase of three cases since CDTR published on 9 June 2018.

[France](#) reported 2 702 cases in 2018 as of 19 September 2018, including three deaths. This is an increase of 38 cases since 29 July 2018. Since the beginning of the outbreak in November 2017, there have been 2 779 cases, including three deaths, reported across the country. The highest incidence is in children under one year of age. Of the reported cases, 23% were hospitalised and 89% were not vaccinated or incompletely vaccinated. The outbreak has a decreasing trend across the country.

[Germany](#) reported 493 cases of measles in 2018 as of 9 September 2018. This is an increase of 24 cases since the national report as of 19 August 2018.

[Greece](#) reported 2 290 cases in 2018 as of 11 October 2018, including two deaths. This is an increase of five cases since 6 September 2018. As of 11 October 2018 and since the beginning of the outbreak in May 2017, Greece has reported 3 258 measles cases, of which 1 885 were laboratory-confirmed. Among the laboratory-confirmed cases, four deaths were reported.

[Hungary](#) reported 18 cases of measles in 2018 as of 23 September 2018. No new cases have been reported since 10 June 2018 according to national reports.

[Ireland](#) reported 86 cases of measles in 2018 as of 6 October 2018. This is an increase of 2 cases since the previous national report on 1 September 2018.

[Italy](#) reported 2 248 measles cases, including six deaths, between 1 January and 31 August 2018. This is an increase of 219 cases, including two deaths, since the previous national report on 30 June 2018 and the previous CDTR on 14 September 2018. The median age of the cases is 25 years and 91% of the cases were unvaccinated. Ninety-eight cases were reported among health workers. Cases are reported from all 20 regions, but 88% of the cases were from seven regions: Sicily (1 116), Lazio (230), Calabria (172), Campania (164), Lombardy (148), Emilia Romagna (88) and Tuscany (72).

[Latvia](#) reported 20 cases of measles between January and July 2018. This is an increase of five cases since the previous CDTR published in March.

[Lithuania](#) reported one case in 2018 as of 31 August 2018. The case was reported in July. No cases were reported in 2017.

Luxembourg: On 4 September 2018, [media sources](#), quoting health authorities, reported seven cases of measles in Luxembourg in 2017 and 2018. All cases were imported.

[The Netherlands](#) reported 0.1 cases of measles per 100 000 population in 2018. According to TESSy data, there were 22 cases reported in 2018.

[Norway](#) reported 10 cases of measles in 2018.

[Poland](#) reported 123 cases of measles in 2018 as of 30 September 2018. This is an increase of 7 cases since the previous national report on 31 August 2018.

[Romania](#) reported 5 100 measles cases, including 22 deaths, in 2018 as of 5 October 2018. This is an increase of 192 cases since the previous CDTR on 14 September 2018. Since the beginning of the outbreak in October 2016 and as of 5 October 2018, Romania has reported 15 379 confirmed measles cases, including 59 deaths.

[Spain](#) reported 213 confirmed measles cases in 2018 as of 7 October 2018. Since the previous CDTR on 14 September 2018, this represents an increase of six cases across the country.

[Sweden](#) reported 35 cases of measles since the beginning of 2018 as of 4 October 2018. This is an increase of two cases since the previous CDTR on 14 September 2018.

[Switzerland](#) reported 40 cases as of 2 October 2018. This is an increase of 12 cases since the CDTR on 14 September 2018.

The United Kingdom ([England and Wales](#)): Between 1 January 2018 and 10 September 2018, there have been 876 laboratory-confirmed measles cases in England. Cases were reported in most areas, with London (305), the South-East (188), South-West (141), West Midlands (87) and Yorkshire and Humberside (84) reporting the most cases. This is an increase of 138 cases since

the CDTR published on 11 August 2018.

Relevant epidemiological summary for countries outside EU/EFTA

On 3 October 2018, [media sources](#) quoting health authorities reported an outbreak of measles in Israel, with 480 cases reported between January and September 2018.

[Russia](#) reported 1 953 cases of measles from January to July 2018. This is an increase of 236 cases since the previous CDTR on 11 August 2018.

[Serbia](#) reported 5 741 cases, including 15 deaths, between October 2017 and 5 October 2018. This is an increase of 16 cases since 7 September 2018. Of the reported cases, 2 893 were confirmed.

[Ukraine](#) reported 32 489 cases of measles in 2018 as of 9 October 2018, including 14 deaths. This is an increase of 1 745 cases and 1 death since the previous CDTR on 14 September 2018. Among the cases, 13 013 were adults and 19 476 were children. Most of the cases were reported from Lviv, Zakarpattia, Ivano-Frankivsk, Odessa, the city of Kyiv and the Ternopil region.

According to [WHO PAHO](#), in 2018 and as of 29 September 2018, 11 countries reported 6 670 confirmed cases in the Americas.

[Mauritius](#) reported 937 confirmed measles cases, including three deaths, as of 16 September 2018. This is an increase of 129 cases since the CDTR published on 14 September 2018. The most affected districts are Port Louis and Black River. A single genotype of measles virus, D8, was detected in 13 samples. The source of infection of measles is most likely an imported case.

ECDC assessment

Given the current extent of measles circulation in the EU/EEA, the trend in recent years and the fact that vaccination coverage for the first and second dose is suboptimal, there is a high risk of continued measles transmission with mutual exportation and importation between EU/EEA Member States and third countries. For a more complete assessment, please consult ECDC's [Risk of measles transmission in the EU/EEA](#) published on 23 March 2018.

Actions

ECDC is monitoring measles outbreaks through epidemic intelligence and reports monthly. ECDC also gathers measles surveillance data through The European Surveillance System (TESSy) for 30 EU/EEA countries.

Dengue – France, Réunion – 2018

Opening date: 13 March 2018

Latest update: 12 October 2018

Epidemiological summary

Since the beginning of 2018 and as of 30 September 2018, there have been 6 615 cases of dengue in Réunion, including 5 deaths. Of the 5 fatalities reported, 3 are considered directly related to dengue. The main affected areas are on the western part of the island. The circulating serotype is DENV-2. The main vector of infection implicated in the outbreak is *Aedes albopictus*.

On 10 July 2018, authorities decided to raise the level of the [ORSEC](#) emergency plan to 4. Control activities are currently in place and include active reinforced vector control, enhanced surveillance, blood safety measures and social mobilisation.

Source: [Regional authorities](#)

ECDC assessment

The circulation of the virus during the austral winter increases the risk of a second epidemic wave during the upcoming austral summer when weather conditions will be more favourable for vectors.

For a more thorough assessment, refer to the update of the rapid risk assessment [Dengue outbreak in Réunion, France](#) published on 6 July 2018.

Actions

ECDC is monitoring this outbreak through epidemic intelligence and monthly reports.

Ebola virus disease - tenth outbreak - Democratic Republic of the Congo - 2018

Opening date: 1 August 2018

Latest update: 12 October 2018

Epidemiological summary

As of 10 October 2018, there have been 200 Ebola virus disease cases (165 confirmed, 35 probable), including 125 deaths (90 of which were confirmed cases), since the beginning of the outbreak.

Ten health zones in two provinces have reported confirmed and probable Ebola virus disease cases: Beni, Butembo, Kalungata, Mabalako, Masereka, Musienene and Oicha health zones in North Kivu Province and Komanda, Mangina and Tchomia health zones in Ituri Province.

Response activities: According to the European Civil Protection and Humanitarian Aid Operations (ECHO), as of 10 October 2018, 2 652 contacts have been identified in Beni (1 683), Butembo (280), Masereka (243), Mabalako (200), Tchomia (119), Komanda (73), Mandima (53) and Musienene (1). A total of 52.3% of these contacts were followed up.

According to the latest Ministry of Health update, as of 10 October 2018, 15 807 people have been vaccinated in Beni (5 838), Mabalako (4 289), Mandima (1 663), Katwa (1 392), Butembo (1 085), Masereka (390), Tchomia (355), Bunia (434), Komanda (240) and Oicha (121).

Travel: [Uganda](#), with high cross-border mobility with the DRC, has put in place an Ebola virus disease [preparedness plan](#) with support from WHO that covers the following areas: coordination, investigations and surveillance, risk communication, cross-border entry screening at all major border points in all very high-risk districts, laboratory diagnostics and case management.

[South Sudan](#) is one of the four high-risk countries prioritised by WHO to enhance preparedness and operational readiness and has activated a multisectoral Ebola virus disease taskforce to coordinate preparedness and response activities.

Furthermore, Burundi, [Rwanda](#) and [Zimbabwe](#) have established entry screening. According to [WHO](#), as of 11 October health screening had been established at 57 points of entry.

[Belgium](#), [Germany](#), [Italy](#) and [Spain](#) have issued advice against traveling to the North Kivu region due to the Ebola outbreak. Additionally, the [CDC](#) and [WHO](#) have issued travel recommendations.

Sources: [Ministry of Health of the Democratic Republic of the Congo](#) | [WHO](#)

ECDC assessment

While no confirmed cases in neighbouring countries have been documented as of 10 October 2018, the fact that the outbreak is ongoing in areas with an important cross-border population flow with Rwanda and Uganda remains of particular concern. In addition, the implementation of response measures in the field remains challenging because the outbreak occurs in areas affected by prolonged humanitarian crises and an unstable security situation arising from a complex armed conflict.

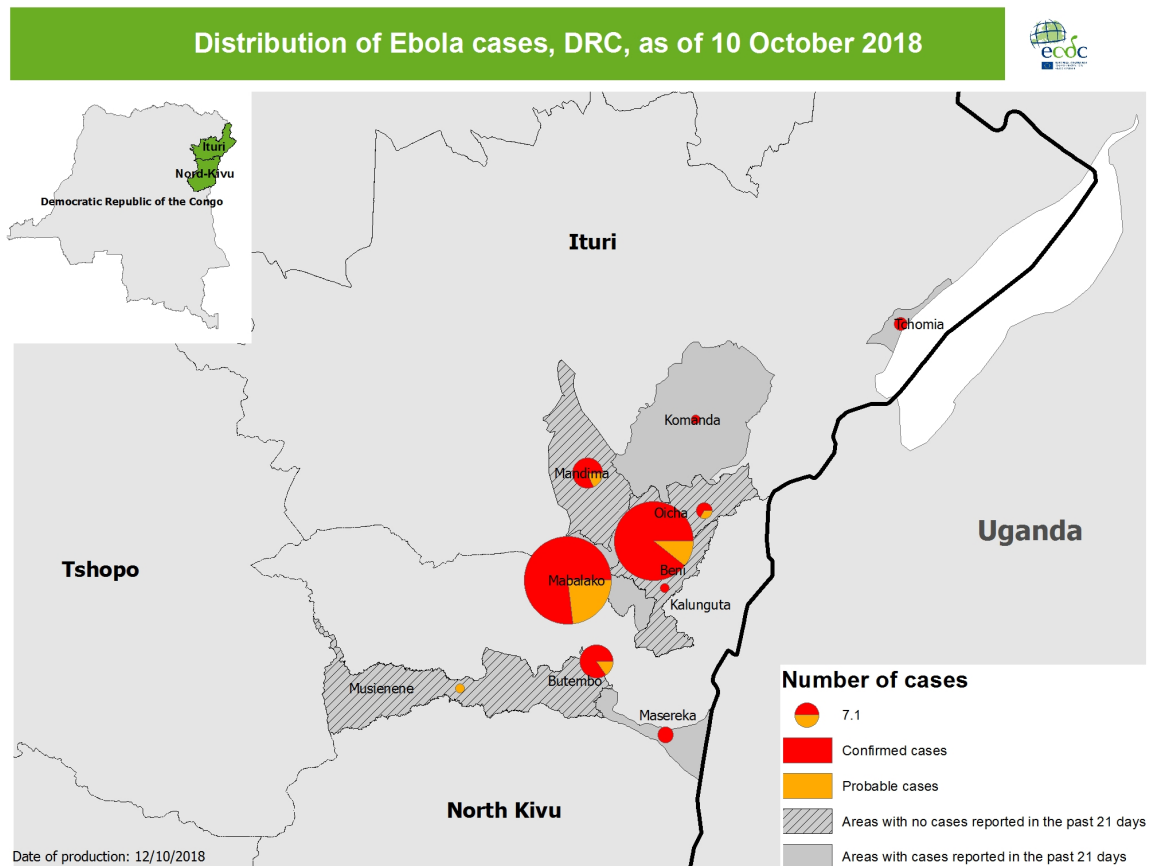
The probability of exposure to the disease for EU/EEA citizens who live or travel in Ebola virus disease-affected areas of the DRC is low provided they adhere to recommended precautionary measures. The overall risk of introduction and further spread of Ebola virus within the EU/EEA is very low. However, the risk can only be eliminated by stopping transmission on a local level.

Actions

ECDC published an updated [rapid risk assessment](#) on 5 October 2018.

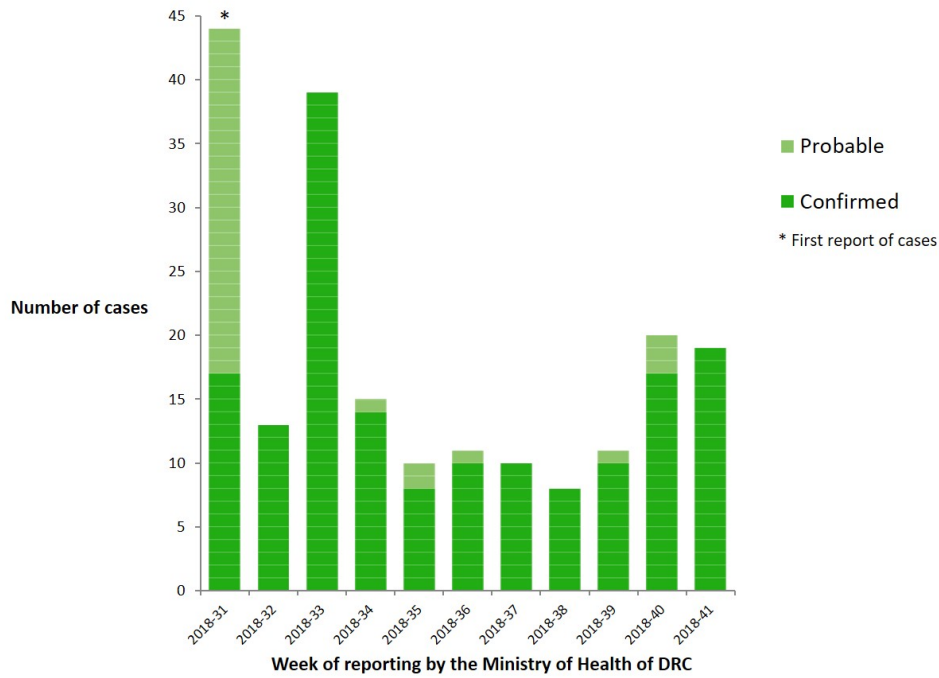
Distribution of Ebola Cases, DRC, as of 10 October 2018

ECDC



Distribution of confirmed and probable cases of Ebola Virus Disease, North Kivu and Ituri Provinces, DRC, as of 10 October 2018

ECDC



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