I. Executive summary
EU Threats

West Nile virus - Multistate (Europe) - Monitoring season 2018
Opening date: 30 May 2018 Latest update: 24 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 12 and 18 October 2018, EU Member States reported 34 human West Nile virus (WNV) infections in Italy (14), Hungary (9), Greece (8), France (2) and Austria (1). EU neighbouring countries reported 16 cases, all by Serbia.

In two areas (NUTS 3 level) in France, human cases were reported for the first time. All other human cases were reported from areas that have been affected during previous transmission seasons.
This week, 8 deaths were reported by Greece (6), Italy (1) and Serbia (1).

In the same week, as of 17 October, 8 outbreaks among equids were reported by Italy (6), Spain (1) and Portugal (1).

Autochthonous dengue – France – 2018
Opening date: 8 October 2018 Latest update: 19 October 2018
In October 2018, French health authorities reported five locally acquired cases of dengue (DNV-2) in the Provence-Alpes-Côte d’Azur region. Additionally, one locally acquired case of dengue (DNV-1) was also reported in the Occitanie region. The two events are not linked.

Influenza – Multistate (Europe) – Monitoring season 2018 – 2019
Opening date: 8 October 2018 Latest update: 19 October 2018
Influenza transmission in Europe shows a seasonal pattern, with peak activity during the winter months. So far this season, influenza viruses were detected sporadically in specimens from persons with respiratory illness presenting to medical care. Both influenza A and B type viruses were detected.

➔ Update of the week
In week 41 2018 from 8 to 14 October 2018, influenza activity was low throughout Europe. Both influenza A and B type viruses were detected. For week 41 2018, data from the 21 countries or regions reporting to the EuroMOMO project indicated all-cause mortality to be at expected levels for this time of the year.
In October 2018, the Spanish Ministry of Health reported three confirmed autochthonous dengue cases in Spain.

On 16 October 2018, Spanish health authorities confirmed the third autochthonous dengue case in Spain. This case belongs to the same family from which two confirmed cases were reported in the previous CDTR on 12 October. All cases had onset of symptoms in the second half of August (19, 23 and 27 of August 2018). During the incubation period, all cases were together in the Murcia region (4 to 9 August 2018) and Cádiz province (10 to 16 August 2018).

Chikungunya and dengue are vector-borne diseases that affect 50 to 100 million people each year worldwide. Over the past decade, chikungunya and dengue have been detected in an increasing number of countries. Chikungunya virus infection has been circulating in Asia and Africa and has reached the Caribbean and the Americas since 2013 to 2014.

In 2017, France and Italy reported autochthonous chikungunya cases. Dengue fever is present in Asia, the Pacific, the Caribbean, the Americas and Africa. In 2018, autochthonous cases of dengue were reported in Spain and in France. No autochthonous cases of chikungunya have been detected in EU/EEA Member States.

Chikungunya: The virus is largely spread in the Americas region, with several countries reporting cases in 2018. Additionally, Sudan, India and Thailand reported the largest number of new chikungunya cases since the last update on 28 September 2018. New cases have also been recorded in Colombia, Costa Rica, El Salvador, Nicaragua and Panama since the previous update. No outbreaks have been identified in Europe and the Australia and Pacific region since the previous report.

Dengue: Compared with the same period in 2017, Thailand, Cambodia, Bangladesh and Mexico have observed an increasing trend in the number of cases. Additionally, nine autochthonous dengue cases were reported in the European Union in October in France (6) and Spain (3).

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.

Over the past week, the Ministry of Health of the Democratic Republic of the Congo has reported 23 additional cases in Beni (17), Butembo (3), Kalunguta (1), Mabalako (1) and Masereka (1).

As of 17 October 2018, there have been 223 Ebola virus disease cases (188 confirmed, 35 probable), including 144 deaths (109 of which were confirmed cases), since the beginning of the outbreak.

After the first meeting of the 2018 International Health Regulations (IHR) Emergency Committee for Ebola virus disease in the DRC on 17 October 2018 held by WHO in Geneva, Switzerland, the Emergency Committee concluded that the epidemic is not at this stage a public health emergency of international concern.

According to the latest disease outbreak news from the WHO, as of 18 October 2018, the response to the Ebola virus disease outbreak in the DRC has seen significant improvements over the past weeks. But logistical challenges remain due to poor infrastructure continue to affect surveillance, case detection and confirmation, contact tracing, and access to vaccines and therapeutics. Despite these challenges, the Emergency Committee also noted that the response of the government of the Democratic Republic of the Congo, WHO, and partners has been rapid and comprehensive.
II. Detailed reports

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

Opening date: 30 May 2018  Latest update: 24 October 2018

Epidemiological summary

Between 12 and 18 October 2018, EU Member States reported 34 human West Nile virus (WNV) infections in Italy (14), Hungary (9), Greece (8), France (2) and Austria (1). EU neighbouring countries reported 16 cases, all by Serbia.

In two areas (NUTS 3 level) in France human cases were reported for the first time. All other human cases were reported from areas that have been affected during previous transmission seasons.

This week, 8 deaths were reported by Greece (6), Italy (1) and Serbia (1).

In the same week, as of 17 October, 8 outbreaks among equids were reported by Italy (6), Spain (1) and Portugal (1).

In 2018, as of 18 October 2018, EU Member States have reported 1,436 human cases in Italy (550), Greece (302), Romania (268), Hungary (212), Croatia (45), France (24), Austria (19), Bulgaria (11), Slovenia (3) and the Czech Republic (2). EU neighbouring countries reported 498 human cases in Serbia (385), Israel (110) and Kosovo* (3). To date, 162 deaths due to West Nile virus infection have been reported by Italy (44), Greece (41), Romania (38), Serbia (35), Bulgaria (1), the Czech Republic (1), Hungary (1) and Kosovo* (1).

In September 2018, a veterinarian was diagnosed with suspected WNV infection after performing an autopsy on a deceased owl 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. During the current transmission season, 243 outbreaks among equids have been reported by Italy (128), Hungary (84), Greece (14), France (8), Romania (2), Germany (2), Spain (2), Austria (1), Slovenia (1) and Portugal (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 WNV 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 Heath 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, most likely infected through contact transmission during the autopsy of a deceased bird and not through a mosquito bite. 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 virus infections by affected areas as of 18 Oct

Distribution of West Nile virus infections among humans and outbreaks among equids in the EU as of 18 Oct

Autochthonous dengue – France – 2018
Opening date: 8 October 2018  Latest update: 19 October 2018
Epidemiological summary

On 4 October 2018, the French National Reference Laboratory for arboviruses confirmed an autochthonous case of dengue in Saint-Laurent-du-Var, Provence-Alpes-Côte d’Azur (PACA) region, southern France. The onset of symptoms was on 21 September 2018. The lab results revealed a serotype 2 (DEN-2). This is the first autochthonous case identified in 2018 in metropolitan France. The patient, a resident of Saint-Laurent-du-Var, did not travel outside of the PACA region in the 15 days prior to symptom onset. On 17 October 2018, according to media reports quoting French health authorities, door-to-door case finding conducted on 8 to 9 October in Saint-Laurent-du-Var led to the diagnosis of four additional cases residing close to the home of the index case. The Alpes-Maritimes department has been colonised by Aedes albopictus since 2004 and enhanced surveillance is implemented every year from May to November.

On 10 October 2018, the French National Reference Laboratory for arboviruses confirmed an autochthonous case of dengue in the Montpellier area (Hérault department, Occitanie region, southern France). The onset of symptoms was on 27 September 2018. RT-PCR assays performed on blood samples taken on the fifth and sixth days of illness confirmed dengue serotype 1 (DEN-1). The patient, a resident of Clapiers, a suburb of the city of Montpellier, did not travel out of the Occitanie region in the 15 days prior to symptom onset. The Hérault department has been colonized by Aedes albopictus since 2011 and enhanced surveillance is implemented every year from 1 May to 30 November.

So far, no epidemiological link has been established between the event in Saint-Laurent-du-Var and the event in Montpellier area. Control and prevention measures have been taken in the areas affected as per national recommendations.

SOURCE: InVS, Media

ECDC assessment

Isolated cases or small clusters of autochthonous dengue in the Provence-Alpes-Cote d’Azur and Occitanie regions are not unexpected as Aedes albopictus is established in the area and previous similar occurrences have been documented in the PACA region in previous years (2010, 2013, 2014 and 2015). From 1 May to 5 October 2018, Occitanie reported 26 imported cases and the PACA region reported 47 imported cases. The risk of further transmission is considered to be low due to unfavourable weather conditions and active case-finding activities are ongoing.

Actions

ECDC is monitoring this event through epidemic intelligence. ECDC is producing a rapid risk assessment on 'Local transmission of dengue in France and Spain - 2018' to be published on 22 October 2018.

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

Epidemiological summary

Week 41, 2018 (8 to 14 October 2018)

Influenza activity was low throughout Europe. Influenza viruses were detected sporadically in specimens from persons with respiratory illness presenting to medical care. Both influenza A and B type viruses were detected.

For week 41 in 2018, data from the 21 countries or regions reporting to the EuroMOMO project indicated all-cause mortality to be at expected levels for this time of the year.

2018–2019 Season overview

As is usual for this time of the year, influenza activity is low in Europe. 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 emisphere influenza season, to provide better protection against recently circulating influenza A(H3N2) viruses. 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 Δ162-163 in haemagglutinin (HA), similar to the 2018–2019 vaccine for the northern hemisphere influenza season.
ECDC assessment
As expected for this time of the 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.

Autochthonous dengue – Spain – 2018
Opening date: 10 October 2018 Latest update: 19 October 2018

Epidemiological summary
On 9 October 2018, the Spanish Ministry of Health reported two confirmed autochthonous dengue cases in Spain. Additionally, according to media quoting health authorities, a third case was confirmed on 16 October 2018. 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, media

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 'Local transmission of dengue in France and Spain - 2018' to be published on 22 October 2018.

Chikungunya and dengue – Multistate (World) – Monitoring global outbreaks
Opening date: 27 January 2017 Latest update: 19 October 2018

Epidemiological summary
Europe
Nine autochthonous dengue cases were reported in the European Union in October 2018 in France (6) and Spain (3).

Americas and the Caribbean
Chikungunya:
Bolivia: In 2018, as of 11 September, Bolivia has reported 78 confirmed chikungunya cases. This represents an increase of one case since the previous update on 28 September 2018. For the same period in 2017, Bolivia reported 22 cases.

Brazil: In 2018, as of 8 September, Brazil has reported 52,613 confirmed cases. This represents an increase of 2,257 confirmed cases since the previous update on 28 September 2018. Among the confirmed cases, the Brazilian Ministry of Health has reported 23 deaths due to chikungunya. For the same period in 2017, 187 deaths were confirmed due to chikungunya.
**Colombia:** In 2018, as of 5 October, Colombia has reported 509 chikungunya cases. Among these cases, 99 are laboratory-confirmed cases and 12 remain suspected cases. This represents an increase of 115 cases since the previous report on 28 September 2018.

**Costa Rica:** In 2018, as of 12 October, Costa Rica has reported 108 suspected chikungunya cases. This represents an increase of 2 suspected cases since the previous RT update on 30 September 2018.

**El Salvador:** In 2018, as of 6 October, El Salvador has reported 303 suspected cases. This represents an increase of 81 suspected cases since the previous update on 28 September 2018. For the same period in 2017, El Salvador reported 488 suspected cases.

**Nicaragua:** In 2018, as of 7 October, Nicaragua has reported 245 suspected cases. There are 64.1% fewer cases in 2018 than were seen in 2017. Additionally, 26 cases were confirmed for the same time period in Nicaragua, this is a 7.2% increase compared to number of confirmed cases in 2017.

**Panama:** In 2018, as of 29 September, Panama has reported 25 confirmed cases. This represents an increase of 19 confirmed cases since the previous update.

Dengue: In 2018, as of 6 October, PAHO has reported 388 000 suspected and confirmed dengue cases in the whole Americas region. Brazil accounts for more than half of the cases (234 000), followed by Mexico (44 000), Nicaragua (34 500), Paraguay (29 000) and Colombia (27 300). Mexico has experienced a large increase in the past three months, recording a threefold increase. The figures for each country of the Americas region can be found on the WHO health information platform.

**Asia Chikungunya:**

**India:** In 2018, as of 30 September, India has reported 30 121 suspected chikungunya cases. Additionally, 5 789 chikungunya cases are confirmed.

**Thailand:** In 2018, as of 17 October, Thailand has reported 453 cases from eight provinces. Satun is the most affected province (207 cases) and the other provinces affected are Bangkok, Krabi, Narathiwat, Nakhon Si Thammarat, Phuket, Songkhla, Surat Thani and Trang. This represents an increase of 111 cases since the previous RT update on 27 September 2018.

**Dengue:**

In Asia, the following countries have reported an increasing trend compared with last year:

**Thailand** has reported 41 360 cases as of 8 October 2018. This represents an increase of 4 405 since the last RT report on 27 September 2018. This is an increase of approximately 17 000 cases compared with the same period last year.

As of 1 September 2018, **Cambodia** has reported 6 097 suspected dengue cases, approximately 4 000 additional cases compared with last year.

As of 6 October 2018, **Taiwan** has reported 146 autochthonous cases. There were 9 autochthonous cases on the island for the same time period last year, representing a substantial increase in 2018. According to the Taiwanese CDC, the risk of autochthonous epidemic remains high.

As of 4 October 2018, **Bangladesh** has reported 6 479 cases nationwide, an eightfold increase compared with last year’s figures.

The following countries have reported a stable or decreasing trend of dengue compared with the same period in 2017:

**Laos** has reported 4 435 dengue cases as of 1 September 2018. Dengue activity is remaining stable and expected to continue to decrease following the seasonal trend.

**Malaysia** has reported 57 371 cases of dengue as of 11 October 2018. This represents an approximate decrease of 16 000 cases compared with the same time period in 2017.

According to the Ministry of Health as of 12 October 2018, **Sri Lanka** has reported 39 793 cases of dengue compared with 150 000 cases for the same time period in 2017.

**Vietnam** has reported 48 607 cases as of 25 August 2018. This is a decrease in the number of reported cases compared with 108 925 for the first eight months in 2017.
According to national authorities, Singapore has reporting 2 155 cases as of 11 October 2018. The numbers of cases are consistent with the burden reported in 2017 for the same time period.

China has reported 933 dengue cases cumulatively in 2018. The number of reported cases is consistent with the burden reported in 2017 for the same period observed in the previous three years.

According to WHO, Yemen has reported 1 188 dengue cases, as of 7 October 2018. This is a similar trend compared with 2017.

According to the Ministry of Health, India has reported 40 868 dengue cases as of 30 September 2018. This is 37 820 fewer than recorded for the same time period in 2017.

According to WHO, the Philippines has reported 69 088 dengue cases nationwide from 1 January to 28 July 2018. The number of cases is consistent with trends of the five-year average.

Africa
Chikungunya:
Sudan: According to WHO as of 15 October 2018, from 31 May 2018 through 2 October 2018, seven states (Kassala, Red Sea, Al Gadaref, Northern State, South Darfur and Khartoum) have reported 13 978 cases of chikungunya. Among the cases, some also tested positive for dengue. Of these cases, 95% are from Kassala State. No hospital admission or death has been officially reported.

Dengue:
Senegal has reporting an outbreak in the Fatick Region in the southwestern part of the country. As of 2 October 2018, local authorities have detected 558 suspected cases, of which 24 are confirmed. The serotype is DENV-1. The last outbreak of dengue fever in the country occurred at the end of 2017.

Since the beginning of 2018 and as of 30 September, there have been 6 615 cases of dengue in Réunion. Cases have significantly decreased over the past weeks, but the circulation of the virus during the austral winter is of concern and increases the risk of a second epidemic wave next summer.

Australia and the Pacific
Chikungunya: No outbreaks have been reported since the previous monthly update.

Dengue:
As of 12 September 2018, Australia has reported 532 dengue cases since the beginning of this year. Fewer cases have been reported to date in 2018 compared to the previous five years.

According to WHO, New Caledonia has reported 1 855 dengue cases in 2018 as of 7 September. Cases are showing a downward trend. DENV-2 is the predominant circulating serotype.

According to the Pacific Public Health Surveillance Network and local health authorities, there are DENV-1 outbreaks or active circulation in Wallis and Futuna (197 autochthonous cases), Tahiti, Bora Bora, Ra'iatea, Mo'orea, Nuku Hiva and Rangiroa.

DENV-2 is circulating in American Samoa, Kiribati and Tonga.

ECDC assessment
Chikungunya and dengue are endemic in large regions of the intertropical convergence zone. Introduction in Europe in areas with competent vectors via viraemic travellers is possible, although the mosquito vector population density is expected to decline in the coming weeks.

ECDC published a rapid risk assessment on chikungunya in France on 24 August 2017, a rapid risk assessment on chikungunya in Italy on 9 October 2017 and a rapid risk assessment on the dengue outbreak in Reunion on 6 July 2018.

Actions
ECDC monitors these threats through epidemic intelligence and reports on a monthly basis.
Geographical distribution of Chikungunya cases detected worldwide in the past three months, as of 17 October 2018

ECDC
Geographical distribution of dengue cases detected worldwide in the past three months, as of 19 October 2018

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

Opening date: 1 August 2018
Latest update: 19 October 2018

Epidemiological summary
As of 17 October 2018, there have been 223 Ebola virus disease cases (188 confirmed, 35 probable), including 144 deaths (109 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 WHO Regional Office for Africa Situation Report, as of 15 October 2018, 4 707 contacts have been identified in Beni (3 601), Butembo (310), Masereka (379), Mabalako (166), Komanda (96), Musienene (59), Mandima (52) and Kalunguta (44). A total of 77.9% of these contacts were followed up.
According to the latest Ministry of Health update, as of 17 October 2018, 18 998 people have been vaccinated in Beni (8 422), Mabalako (4 391), Mandima (1 663), Katwa (1 392), Butembo (1 085), Masereka (630), Bunia (434), Tchomia (355), Komanda (240), Musienene (160), Oicha (121) and Kalunguta (105).

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 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 17 October 2018, health screening had been established at 48 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 17 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. ECDC will publish an epidemiological update on 19 October 2018 on its website.
Distribution of confirmed and probable cases of Ebola Virus Disease, North Kivu and Ituri Provinces, DRC, as of 17 October 2018

Distribution of Ebola cases, DRC, as of 17 October 2018

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