COMMUNICABLE DISEASE THREATS REPORT

CDTR
Week 42, 13-19 October 2019

All users

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

West Nile virus - Multi-country (World) - Monitoring season 2019

Opening date: 3 June 2019 Latest update: 18 October 2019

During the transmission season, expected to be from June–November 2019, ECDC monitors the occurrence of infections in EU/EEA countries 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 1 (Global Administrative Unit Layers 1) level where at least one locally-acquired human infection meeting the EU case definition (Commission Implementing Decision (EU) 2018/945) has been reported.

➔Update of the week

Between 11 and 17 October 2019, EU Member States reported four human cases in Greece (2) and Italy (2). Five cases were reported from EU neighbouring countries in Serbia (4) and North Macedonia (1). All human cases were reported from areas that have been affected previously. This week, one death was reported by Greece.

In the same week, five outbreaks among equids were reported to the Animal Disease Notification System (ADNS) by Germany (3), France (1) and Greece (1).

Influenza – Multi-country – Monitoring 2019/2020 season

Opening date: 11 October 2019 Latest update: 18 October 2019

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

➔Update of the week

Week 41, 2019 (7-13 October 2019)

• Influenza activity was low throughout the WHO European Region.
• 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.
• Data from the 20 countries or regions reporting to the EuroMOMO project indicated all-cause mortality to be at expected levels for this time of the year.

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Non EU Threats

New! Eastern equine encephalitis - United States - 2019

Opening date: 15 October 2019 Latest update: 18 October 2019

The US CDC reports an increase of eastern equine encephalitis (EEE) cases in the US in 2019.

Ebola virus disease - tenth outbreak - Democratic Republic of the Congo - 2018-2019

Opening date: 1 August 2018 Latest update: 18 October 2019

On 1 August 2018, the Ministry of Health of the Democratic Republic of the Congo declared the 10th outbreak of Ebola virus disease in the country. The outbreak affects North Kivu, South Kivu and Ituri Provinces in the north-east of the country, close to the border with Uganda. In 2019, several imported cases from the Democratic Republic of the Congo were detected in Uganda. However, no autochthonous cases have been reported in Uganda as of 16 October 2019. On 17 July 2019, the International Health Regulations (IHR) Emergency Committee convened, and the WHO Director-General later declared that the outbreak meets all criteria for a public health emergency of international concern (PHEIC) under the International Health Regulations.

➔Update of the week

Since the previous CDTR and as of 9 October 2019, the Ministry of Health of the Democratic Republic of the Congo (DRC) has reported 20 additional confirmed cases. During the same period, 14 deaths among confirmed cases were reported.

There is a low number of cases reported in the last three weeks concentrated in a smaller geographical area. However, in the past week, several of the confirmed cases sought healthcare in health zones that are no longer experiencing ongoing transmission, such as Beni Health Zone.

The majority of cases in the past week were reported from, or had transmission links to, Biakato Health Area in Mandima Health Zone, with most of the remaining confirmed cases linked to the Mambasa Health Zone. There are issues with access and security in parts of Mandima Health Zone, which had an impact on response activities. This is reflected in a decline in the proportion of confirmed cases listed as contacts and an increase in the proportion of cases dying outside of Ebola Treatment Centres or Transit Centres this past week.

On 12 October 2019, Nyankunde Health Zone reported one confirmed case. This is only the second case for this health zone, which had gone 294 days (almost 10 months) without new cases. The patient resided in Mambasa Health Zone, but arrived in Nyankunde Health Zone on 6 October 2019 to take part in the funeral of a family member.

On 13 October 2019, one ECDC senior expert was deployed in North Kivu, DRC. He will stay for five weeks to assist in the Ebola response.

On 14 October 2019, the WHO tweeted that for the 'first time in history we can admit pregnant women and treat them for Ebola, and they are discharged, still pregnant, they go home and can deliver healthy babies'.

On 15 October 2019, Nature Communications published an article regarding a model that outlines the way socio-economic and environmental factors will impact the spread of Ebola virus in Africa.

On 18 October 2019, 500 000 doses of the second investigational Ebola vaccine (manufactured by Johnson & Johnson) will arrive in DRC, with vaccinations starting in November in two municipalities of Goma and then expanding to other areas.

On 18 October 2019, The Emergency Committee under the International Health Regulations (IHR) 2005 on Ebola virus disease in the Democratic Republic of the Congo will meet for a fifth time. This meeting is to ascertain whether the ongoing outbreak still constitutes a public health emergency of international concern (PHEIC); the Committee will also review the temporary recommendations that are in place to manage the outbreak. The meeting was initially planned for last week, but was postponed.

On 21 October 2019, the African CDC will bring together ministers from nine countries bordering the DRC in Goma to coordinate the response to the Ebola outbreak.

So far, there has been no new confirmed technical information regarding the death due to an unknown illness in Tanzania.

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Mass gathering monitoring – Japan – Rugby World Cup 2019

Opening date: 13 September 2019 Latest update: 18 October 2019

ECDC is monitoring the Rugby World Cup 2019 taking place in Japan from 20 September–2 November 2019 to detect threats to public health that could affect EU/EEA visitors. This event will gather 20 international teams, six of which are from four EU countries: the UK (3), France (1), Ireland (1) and Italy (1). The competitions will be held in 12 stadiums across the country, hosting a total of approximately 400 000 international visitors.

➔Update of the week

Typhoon Hagibis hit Japan on 12 October 2019, resulting in 74 deaths as of 17 October 2019.

Two autochthonous cases of dengue were reported in Tokyo; both have a travel history to Nara and Kyoto in Japan.

Cases of rubella and measles continue to be reported. According to Japan's National Institute of Infectious Disease, an increase of 12 rubella cases and 12 measles cases has been reported since the previous CDTR and as of 9 October 2019.

No other major events have been detected since the previous weekly update.

Chikungunya and dengue – Multi-country (World) – Monitoring global outbreaks

Opening date: 27 January 2017 Latest update: 18 October 2019

Chikungunya virus disease and dengue are vector-borne diseases that affect 50–100 million people each year. In the past decade, an increasing number of countries have detected cases of dengue and chikungunya virus disease. Chikungunya virus disease has been circulating in Africa and Asia and reached the Americas, the Caribbean and the Pacific since 2013–2014. Dengue is present in Africa, the Americas, Asia, the Caribbean and the Pacific. In 2018 and 2019, France and Spain reported autochthonous dengue cases, but no autochthonous chikungunya cases have been reported so far.

➔Update of the week

Chikungunya virus disease: The virus circulates widely in the Americas, with several countries reporting cases in 2019. Chikungunya virus disease cases have also been reported in Asia and Africa during this period. Since the previous update on 20 September 2019, Ethiopia, Brazil and Thailand have reported the majority of new cases.

Dengue: Compared with the same time period in 2018, data for dengue infections so far in 2019 show substantial increases. Brazil, the Philippines, Mexico, Nicaragua, Bangladesh, Thailand, Honduras, Colombia, Malaysia and Sri Lanka are reporting most of the cases (89% of 960 000) during the past three months. In September 2019, Spain and France reported autochthonous cases of dengue.

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II. Detailed reports

West Nile virus - Multi-country (World) - Monitoring season 2019

Opening date: 3 June 2019 Latest update: 18 October 2019

Epidemiological summary

Between 11 and 17 October 2019, EU Member States reported four human cases in Greece (2) and Italy (2). Five cases were reported from EU neighbouring countries in Serbia (4) and North Macedonia (1). All human cases were reported from areas that have been affected previously. This week, one death was reported by Greece.

In the same week, five outbreaks among equids were reported to the Animal Disease Notification System (ADNS) by Germany (3), France (1) and Greece (1).

Since the beginning of the 2019 transmission season and as of 17 October 2019, EU Member States and EU neighbouring countries reported 435 human infections. EU Member States reported 385 cases: Greece (220), Romania (62), Italy (42), Hungary (33), Cyprus (16), Austria (4), Bulgaria (4), France (2), Germany (1) and Slovakia (1). EU neighbouring countries reported 50 human cases in Serbia (27), Israel (10) Turkey (7) and North Macedonia (6).

To date, 43 deaths due to West Nile virus infection have been reported by Greece (30), Romania (6), Italy (4), Cyprus (1), North Macedonia (1) and Serbia (1).

During the current transmission season, 66 outbreaks among equids have been reported by Greece (21), Germany (18), Italy (8), France (7), Hungary (7), Austria (3) and Spain (2). In addition, Germany reported 52 outbreaks among birds to ADNS.

ECDC link: West Nile virus infection atlas
Sources: TESSy | Animal Disease Notification System

ECDC assessment

During this transmission season, Germany and Slovakia reported their first autochthonous human West Nile virus infection. The occurrence of human autochthonous West Nile virus infections in Germany and Slovakia was not unexpected as WNV circulation among either birds, equids and/or mosquitoes has been previously documented. All other human infections were reported in EU Member States with known persistent transmission of West Nile virus in previous years. Further human cases may be detected, but in the coming weeks, environmental conditions will become less suitable for transmission. In accordance with European Commission Directive 2014/110/EU, prospective donors should be deferred for 28 days after leaving a risk area for locally acquired infections unless the results of an individual nucleic acid test are negative.

Actions

During the transmission season, ECDC publishes West Nile virus infection maps together with an epidemiological summary every Friday. More information about the seasonal surveillance of West Nile virus infections can be found on ECDC webpage.

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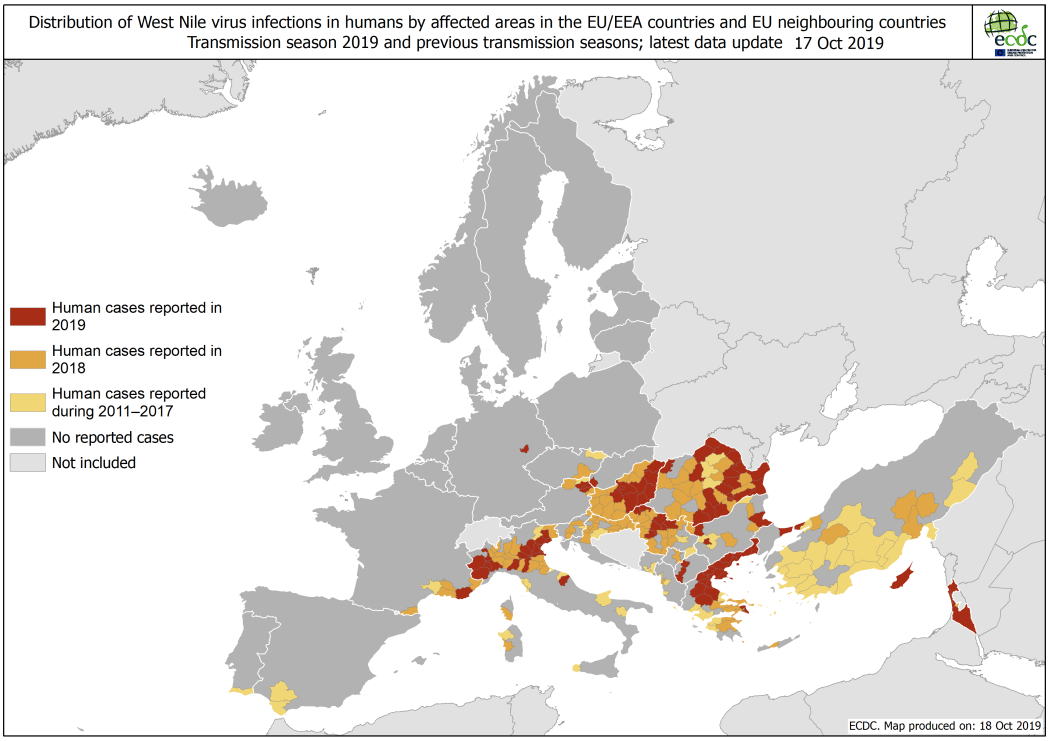
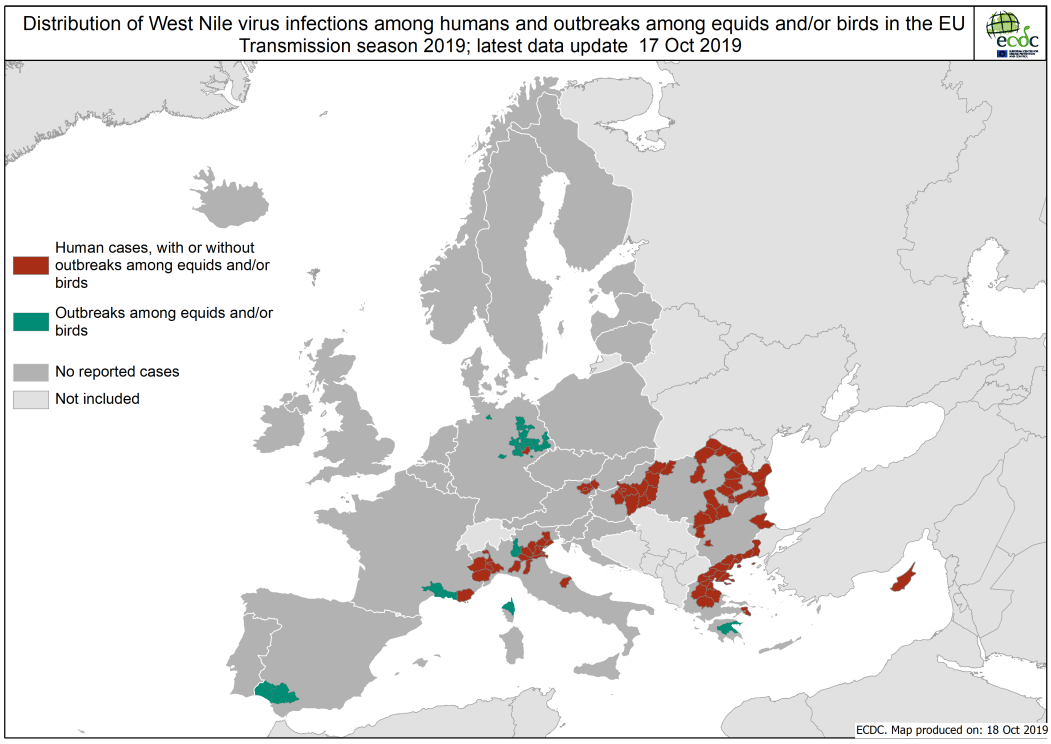
Distribution of human West Nile virus infections by affected areas as of 17 October 2019.

ECDC



Distribution of West Nile virus infections among humans and outbreaks among equids and/or birds in the EU as of 17 October 2019.

ECDC and ADNS



Influenza – Multi-country – Monitoring 2019/2020 season

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Opening date: 11 October 2019 Latest update: 18 October 2019

Epidemiological summary

2019-2020 season overview

• As is usual for this time of year, influenza activity is low in the European Region.
• The full report of the Vaccine Composition Meeting for the southern hemisphere 2020 season can be found here.

Sources: EuroMOMO | Flu News Europe |

ECDC assessment

Influenza activity is low throughout the WHO European Region as is expected for this time of the season. All-cause mortality data show mortality levels within expected ranges for participating countries.

WHO has published recommendations for the composition of influenza vaccines to be used in the 2019–2020 northern hemisphere season. Influenza vaccination for the 2019–2020 season should be promoted because vaccine coverage among the elderly, chronic disease risk groups and healthcare workers is suboptimal in most EU Member States, according to the VENICE report. The vast majority of recently circulating influenza viruses in the Region and worldwide were susceptible to neuraminidase inhibitors, which supports the use of antiviral treatment in accordance with national guidelines.

Actions

ECDC monitors influenza activity in Europe during the winter season and publishes its weekly report on the Flu News Europe website.
ECDC monitors influenza activity in the WHO European Region from week 40/2019 to week 20/2020.

New! Eastern equine encephalitis - United States - 2019

Opening date: 15 October 2019 Latest update: 18 October 2019

Epidemiological summary

The US CDC reports an increase of eastern equine encephalitis (EEE) cases in the US in 2019. As of 15 October 2019, 33 cases have been reported in Massachusetts (12), Michigan (10), Connecticut (4), New Jersey (3), Rhode Island (3), Tennessee (1) and North Carolina (1). Previous cases were reported in 2010 (Rhode Island), 2013 (Connecticut and Massachusetts), 2016 (New Jersey and North Carolina) and 2018 (Michigan). No previous cases were reported in Tennessee during 2009-2018.

From 2009 to 2018, an average of seven cases were reported annually (range 3-15). The most affected states were Florida, Massachusetts, New York, North Carolina and Georgia.

Since January 2019 and as of 14 October 2019, according to media quoting health authorities, 14 deaths have been linked to EEE in Michigan (5), Massachusetts (4), Michigan (5), Connecticut (3), Indiana (1), Rhode Island (1).

Sources: US CDC | EEE ArboNET map | media 1 | media 2 | media 3 | media 4 | media 5

ECDC assessment

EEE is transmitted to humans through mosquito bites (*Aedes*, *Coquillettidia*, and *Culex* species). It requires a freshwater avian host to maintain the cycle of the pathogen. Travellers to, and residents in, the affected areas should apply personal protective measures against mosquito bites. The risk for EU/EEA citizens is low.

Actions

ECDC will monitor through epidemic intelligence.

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Ebola virus disease - tenth outbreak - Democratic Republic of the Congo - 2018 -2019

Opening date: 1 August 2018 Latest update: 18 October 2019

Epidemiological summary

Since the beginning of the outbreak a year ago and as of 16 October 2019, there have been 3 228 cases (3 114 confirmed, 114 probable) in the Democratic Republic of the Congo (DRC), including 2 158 deaths (2 044 confirmed, 114 probable), according to the Ministry of Health of the Democratic Republic of the Congo. During the past 21 days, more than half of the cases had links to Mandima Health Zone.

As of 16 October 2019, 162 healthcare workers have been infected (41 died).

In the DRC, 29 health zones in three provinces have reported confirmed/probable Ebola virus disease cases: Mwenga in South Kivu Province, Alimbongo, Beni, Biena, Butembo, Goma, Kalunguta, Katwa, Kayna, Kyondo, Lubero, Mabalako, Manguredjipa, Masereka, Mutwanga, Musienene, Nyiragongo, Oicha, Pinga and Vuhovi Health Zones in North Kivu Province and Ariwara, Bunia, Mambasa, Nyankunde, Komanda, Lolwa, Mandima, Rwampara and Tchomia in Ituri Province.

In Uganda, one imported case (reported on 29 August) died on 30 August in Kasese district, which borders North-Kivu. However, as of today, there have been no reports of autochthonous transmission in Uganda.

Public health emergency of international concern (PHEIC): On 17 July 2019, the WHO Director-General declared the Ebola virus disease outbreak in the Democratic Republic of the Congo a PHEIC. This declaration followed the fourth IHR Emergency Committee for Ebola virus disease in the Democratic Republic of the Congo on 17 July 2019. The declaration was made in response to the geographical spread observed in the previous weeks as well as the need for a more intensified and coordinated response in order to end the outbreak.

Sources: CMRE | Ebola dashboard Democratic Republic of the Congo | Ministry of Health of the Democratic Republic of the Congo | WHO | WHO Regional Office for Africa

ECDC assessment

ECDC assessment: Implementing response measures remains challenging in the affected areas because of the prolonged humanitarian crisis, the unstable security situation, and resistance in several sectors of the population. A substantial proportion of cases has been detected in individuals not previously identified as contacts, stressing the need to maintain enhanced surveillance and identify the chains of transmission.

The fact that the outbreak is ongoing in areas with a cross-border population flow with Rwanda, South Sudan, Burundi and Uganda remains of particular concern. So far, the identification of imported cases to previously non-affected areas does not change the overall risk for the EU/EEA, which remains very low.

WHO assessment: As of 17 October 2019, the WHO assessment for the Democratic Republic of the Congo states that the risk of spread remains low at the global level and very high at national and regional levels. Concurrent with the decline in case incidence, there has been a further shift in hotspots from urban settings to more rural, hard-to-reach communities, within a more concentrated geographical area. These areas bring additional challenges to the response, including: an extremely volatile security situation; difficulties accessing some remote areas; relatively lower Ebola awareness and delays in engaging with the community (which leads to mistrust and misunderstandings); and potential under-reporting of cases. In such environments, the risk for resurgence remains very high, as does the risk of re-dispersion of the outbreak with cases travelling outside of hotspots to seek healthcare or for other reasons.

Actions

ECDC published an epidemiological update on 13 June 2019 and updated its rapid risk assessment on 7 August 2019.

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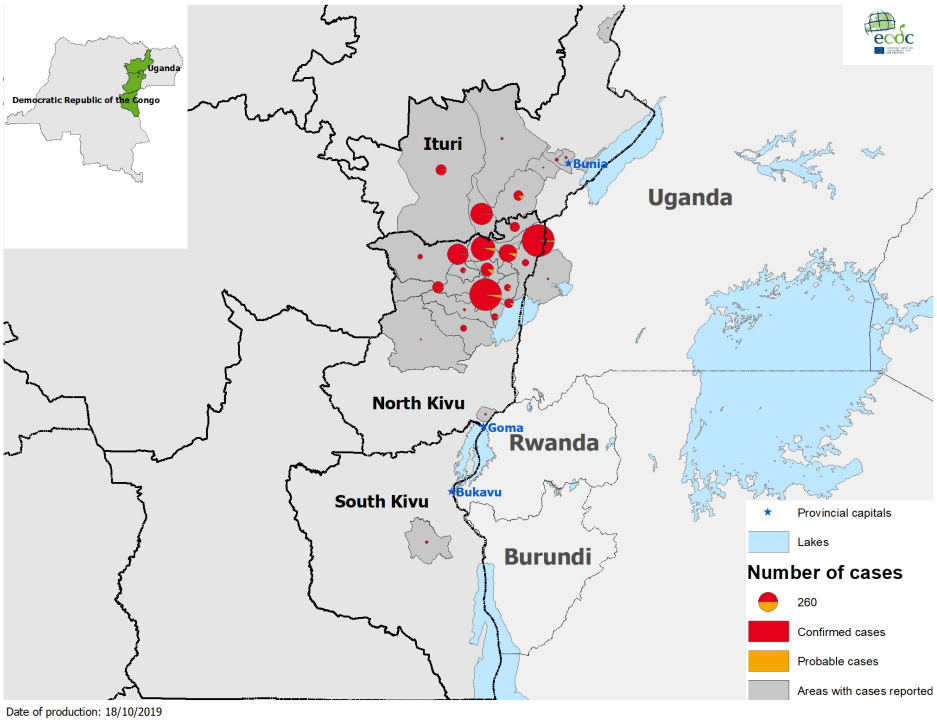
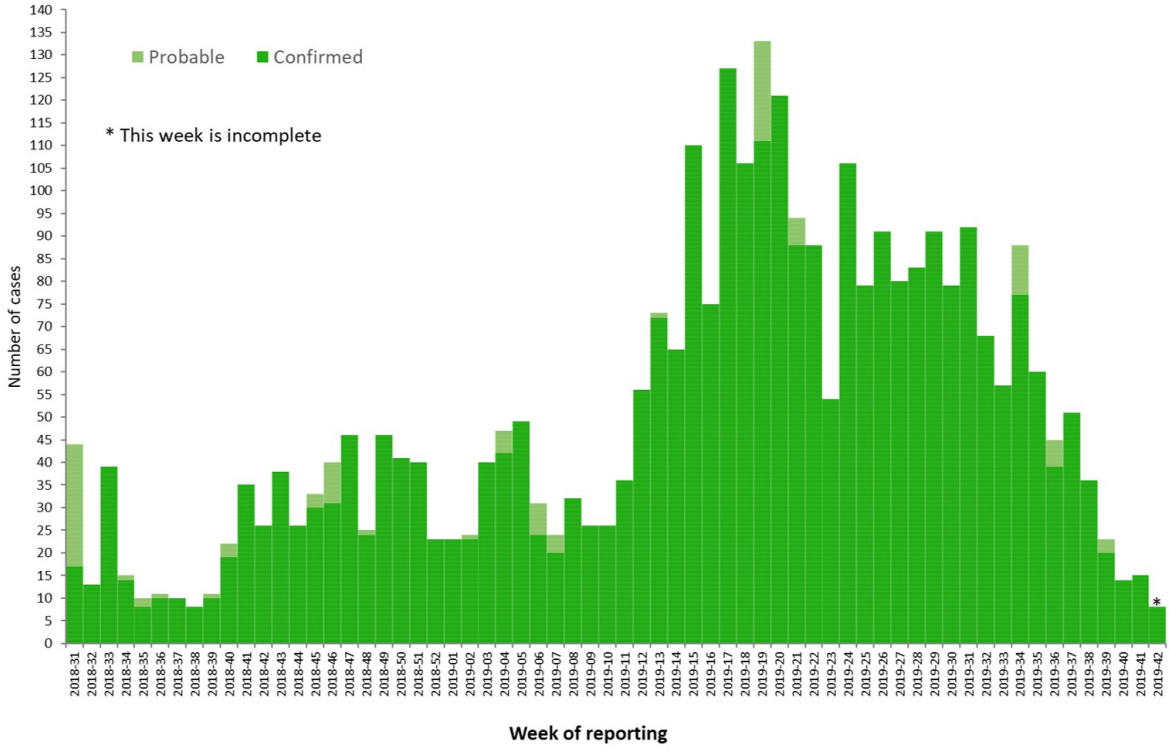
Geographical distribution of confirmed and probable cases of Ebola virus disease, Democratic Republic of the Congo and Uganda, as of 16 October 2019

Source: ECDC



Distribution of confirmed and probable cases of Ebola Virus Disease, Democratic Republic of the Congo and Uganda, as of 16 October 2019

Source: ECDC



Ebola Virus Disease case distribution in DRC and Uganda, as of 16 October 2019

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Source: ECDC

	Number of confirmed cases	Number of probable cases	Confirmed and probable cases	Number of deaths	Conf/Prob cases in past 7 days
Democratic_Republic_of_the_Congo	**3114**	**114**	**3228**	**2158**	
North-Kivu Province	2638	98	2736	1907	
Alimbongo	5	0	5	2	
Beni	678	9	687	451	ACTIVE
Biena	18	2	20	14	
Butembo	283	3	286	352	
Goma	1	0	1	1	
Kalunguta	192	17	209	88	ACTIVE
Katwa	651	23	674	493	
Kayna	27	0	27	8	
Kyondo	25	4	29	19	
Lubero	31	2	33	6	
Mabalako	374	17	391	313	ACTIVE
Manguredjipa	18	0	18	12	
Masereka	50	6	56	23	
Musienene	84	1	85	34	
Mutwanga	32	0	32	12	
Nyiragongo	3	0	3	1	
Oicha	62	0	62	27	ACTIVE
Pinga	1	0	1	0	
Vuhovi	103	14	117	51	
Ituri province	470	16	486	248	
Ariwara	1	0	1	1	
Bunia	5	0	5	4	
Komanda	56	10	66	54	
Lolwa	6	0	6	1	
Mambasa	72	2	74	25	
Mandima	318	4	322	157	ACTIVE
Nyakunde	2	0	2	1	ACTIVE
Rwampara	8	0	8	3	
Tchomia	2	0	2	2	
South-Kivu	6	0	6	3	
Mwenga	6	0	6	3	
Uganda	**1**	**0**	**1**	**1**	
Kasese province	1	0	1	1	
Kasese	1	0	1	1	
Cumulative Total	**3115**	**114**	**3229**	**2159**	

Mass gathering monitoring – Japan – Rugby World Cup 2019

Opening date: 13 September 2019 Latest update: 18 October 2019

Epidemiological summary

Since the previous weekly update, typhoon Hagibis made landfall on 12 October 2019 on Izu Peninsula, south-west of Tokyo. As of 17 October 2019, media reported 74 deaths. Hagibis is one of the strongest typhoons in years and was preceded by heavy rains in 36 of the 47 provinces, mainly in the central, east and north-east parts of the country. More than 133 000 households are left without water and 34 000 without power. In September 2019, typhoon Faxai made landfall in Tokyo.

On 16 October 2019, media reported two autochthonous cases of **dengue** in Tokyo, both with travel history to Nara and Kyoto in Japan. Previously, an outbreak with 160 autochthonous cases of dengue (dengue virus serotype 1) was documented in Tokyo in 2014.

Updates for seasonal influenza, rubella and measles are provided below.

Japan reported an early start of the 2019-2020 **influenza** season, with an increased number of reported cases compared with the same period last year. The analysis in week 40 showed influenza AH1pdm09 (80%), AH3 subtype (11%), and type B (9%).

According to Japan's National Institute of Infectious Disease, 2 222 cases of **rubella** and three cases of congenital rubella syndrome have been reported in Japan this year (as of 9 October 2019), an increase of 12 rubella cases since the previous CDTR. The cases were reported from all prefectures, except Aomori and Kochi, and most of the cases were reported from Tokyo (834), Kanagawa (281), Chiba (195), Saitama (193), and Osaka (126). The national rubella report from May 2019 states that 95% of the cases reported in 2018 and 2019 are adults, mainly males. Japan implemented a vaccination campaign in December 2018, targeting men born between 1962 and 1979.

In 2019 and as of 9 October, Japan has reported 719 cases of **measles** (an increase of 12 cases since the previous CDTR). The cases were reported in 34 out of 47 prefectures, with the majority reported in Osaka (147), Tokyo (118), and Kanagawa (90). On 3 October 2019, a measles alert was issued by health authorities of Kawasaki city and Tokyo metropolitan area to inform the general public on potential exposure to measles on public transport to/from rugby stadiums between 21 and 25 September 2019.

No other major events were reported.

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On 13 September 2019, ECDC started enhanced epidemic intelligence activities related to this mass gathering event.

Source: NIID | NIID measles report | Japan meteorological Agency | media 1 | media 2 | NIID Influenza report | NIID Measles alert | media 3 |media 4 | media 5

ECDC assessment

EU/EEA citizens participating in mass gathering events are typically most at risk of gastrointestinal illness and vaccine-preventable infections.

Rubella poses a particular risk to non-immune pregnant women due to the possibility of an infection resulting in congenital rubella syndrome. They should exercise particular caution and seek healthcare if they have compatible symptoms. All travellers to Japan should check that they are up to date with routine vaccinations.

The prevention of gastrointestinal illnesses is dependent on adequate sanitation, availability of safe drinking water (chlorinated or boiled), and appropriate good food and hand hygiene, i.e. regularly washing hands with soap, eating thoroughly cooked food, washing fruits and vegetables with safe drinking water. Travellers to Japan should apply standard hygiene measures in order to reduce the risk of gastrointestinal illness. More information is available on the ECDC website.

Actions

ECDC is monitoring this event through enhanced routine epidemic intelligence activities and reports on a weekly basis or when significant events are detected.

Chikungunya and dengue – Multi-country (World) – Monitoring global outbreaks

Opening date: 27 January 2017 Latest update: 18 October 2019

Epidemiological summary

Europe

Chikungunya virus disease:

No autochthonous cases of Chikungunya virus were detected in continental EU/EEA countries in 2019.

Dengue:

In September 2019, Spain and France reported autochthonous cases of dengue with no epidemiological link between events. ECDC has issued a rapid risk assessment on 1 October 2019.

Spain: On 16 September 2019, local health authorities in Spain reported a laboratory-confirmed autochthonous case of dengue in Barcelona, Spain, in a resident with no recent travel history outside of Spain. According to Spanish local health authorities, the risk of transmission is very low due to decreasing temperatures.

France: On 20 September 2019, the regional public health agency of Provence-Alpes-Côte d'Azur region reported a locally acquired confirmed case of dengue in a resident of the city of Vallauris in the department of Alpes Maritimes. The case had onset of symptoms on 30 August and did not report any recent travel history outside of mainland France. This case was laboratory confirmed by the French National Reference Centre for Arboviruses (NRC, Marseille). Door-to-door active case finding was implemented around the home of the autochthonous case on 19 September. Four additional cases in the direct vicinity were identified.

In addition, the regional public health agency of Auvergne-Rhône-Alpes reported a locally acquired probable dengue case in a resident of Caluire-et-Cuire − a suburban area of the city of Lyon − in the Rhône department. The case had onset of symptoms on 14 July 2019. The case did not report any recent travel outside of mainland France.

Americas and the Caribbean

Chikungunya virus disease:

Argentina: In 2019, as of 17 August, eight confirmed cases have been reported in Argentina. During the same period in 2018, no cases were reported.

Bolivia: In 2019, as of 1 October, Bolivia has reported 64 cases, compared with 83 cases reported for the same period in 2018.

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This represents an increase of 10 additional cases since the previous CDTR report.

Brazil: In 2019, as of 22 September, Brazil has reported 119 176 probable cases, including 72 confirmed deaths. This represents an increase of 8 549 cases and 15 deaths since the previous CDTR update.

Colombia: In 2019 and as of 6 October, Colombia has reported 441 cases, 43 of which are laboratory confirmed. This represents an increase of 20 cases since the last CDTR report. During the same period in 2018, 546 cases were reported.

Costa Rica: In 2019, as of 15 September, Costa Rica has reported 99 cases. This represents an increase of 35 cases since the last CDTR report. In the same period in 2018, 114 cases were reported.

El Salvador: In 2019, as of 5 October, El Salvador reported 580 suspected cases. This represents an increase of 69 cases since the previous CDTR update. For the same period in 2018, El Salvador reported 303 suspected cases.

Mexico: In 2019, and as of 29 September, five confirmed cases have been reported in Mexico. For the same period in 2018, Mexico reported 20 confirmed cases.

Nicaragua: In 2019, as of 7 September, Nicaragua reported 123 suspected cases. Among these cases, none was confirmed. This represents an increase of 27 cases since the last CDTR report.

Paraguay: In 2019, as of 29 September, Paraguay has reported 51 probable cases. This represents an increase of one additional case since the previous CDTR update. During the same period in 2018, 1 231 cases were reported.

Peru: In 2019, as of 6 October, Peru has reported 137 cases. This represents an increase of 18 additional cases since the previous CDTR update.

Venezuela: In 2019, as of 31 August, the country has reported 105 cases, including six confirmed cases according to WHO PAHO. This represents an increase of 53 cases since the previous CDTR update.

Dengue:
The Pan American Health Organization (PAHO) has reported 2 563 698 suspected and confirmed dengue cases, including 1 082 deaths, in the Americas region in 2019 as of 14 October 2019. Brazil is accounting for 78% of the cases (1 993 271 cases), recording a ten-fold increase compared with the same period in 2018 when 203 200 cases were reported. All four dengue virus serotypes are circulating the country. The highest incidence rates in the Region of the Americas are reported by Nicaragua, Belize, Brazil and Honduras.

The four dengue virus serotypes (DENV 1, DENV 2, DENV 3, and DENV 4) are currently circulating simultaneously in the Region of the Americas, which increases the risk of severe cases. The figures for each country of the Americas Region can be found on the PAHO Health Information Platform.

Asia

Chikungunya virus disease:
India: According to the National Centre for Disease Control, from 28 July to 11 August 2019, several chikungunya cases have been reported in Arunachal Pradesh (77), Tamil Nadu (34) and Karnataka (9). Additionally, since the last CDTR update, media sources reports 164 cases in Pune and 46 cases in Hyderabad.

Malaysia: In 2019 and as of 7 September, 477 cases have been reported across the country, with most of the cases being reported in Selangor and Perak regions according to Malaysia MoH.

Maldives: According to the Maldives Health Protection Agency, in 2019 and as of 4 September, there have been 1 411 cases reported in the country. This represents an increase of 84 cases since the previous CDTR update.

Taiwan: In 2019, as of 13 October, the country has reported 21 chikungunya cases. This is an increase of 10 cases since the previous CDTR update. In the same period in 2018, no indigenous chikungunya cases were reported in Taiwan.

Thailand: In 2019, as of 6 October, the country has reported 8 104 cases with no deaths associated affecting 52 provinces. This is an increase of 817 cases since the previous CDTR update. Provinces reporting the highest incidences are located in the southern part of the country.

Dengue:
This year, most of the countries in Asia and South-East Asia are observing a spike in the number of cases.

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In 2019 and as of 9 October 2019, Japan has reported 371 cases. On 16 October 2019, media reported two autochthonous cases of dengue in Tokyo with travel history to Nara and Kyoto in Japan. Previously, an outbreak with 160 autochthonous cases of dengue (dengue virus serotype 1) was documented in Tokyo in 2014.

The Maldives have officially reported 3 706 cases in 2019 as of 4 September 2019.

Thailand has reported 98 714 cases in 2019 and as of 15 October, compared with 42 000 for the same period in 2018. The most affected provinces are Chiang Rai, Chiang Mai, Mae Hong Son, Nakhon Pathom, Phra Nakhon Si Ayutthaya, Phetchabun, Lamphun and Phatthalung.

Cambodia has reported approximately 56 000 cases of dengue in 2019 and as of 29 September 2019, this is eight times more than the 7 000 cases in the same period in 2018.

Laos has reported 30 662 cases, including 59 deaths in 2019 and as of week 37 (ending on 15 September 2019). The trend of weekly reported cases is decreasing, and dengue activity is significantly higher compared with the same period in 2018 (4 400 cases).

Malaysia has reported 104 950 cases, including 204 deaths in 2019 as of 13 October 2019. In the same period last year, Malaysia has reported 56 608 cases with 98 deaths.

The Philippines have reported has reported 322 693 dengue cases and 1 272 deaths from 1 January–21 September 2019. Last year, for the same period, the country had recorded 149 849 cases and 774 deaths.
The DoH has declared a national dengue epidemic.

Singapore has reported 12 615 cases in 2019 as of 5 October 2019. The number of weekly dengue cases has declined, from a high of 664 in the second week of July, to 249 in the week ending 5 October 2019.

Taiwan has reported 516 cases in 2019 and as of 12 October 2019. In the same period in 2018, Taiwan reported 533 cases.

Nepal has reported 5 095 cases in 2019 and as of 10 September 2019, according to the Ministry of Health. This is an increase of 3 500 cases in the past two months.

For the countries below, different trends have been observed.

Afghanistan has reported its first confirmed dengue case in October 2019 in a person with travel history to India during the incubation period.

Sri Lanka is following the same trend as in 2018. According to the Ministry of Health and as of 14 October 2019, Sri Lanka has reported 54 725 cases of dengue in 2019, compared with 42 000 cases for the same period last year. Colombo, Gampaha, Kalutara and Galle districts are the most affected areas.

For Bangladesh, Pakistan and Nepal, no specific yearly trend can be observed, due to the absence of solid data for 2018.

Bangladesh has reported 81 839 cases in 2019, as of 16 September 2019. This is an increase of approximately 30 000 cases in the last month.

Pakistan has reported 3 855 cases of dengue since the beginning of the year and as of 1 September 2019, according to the national institute of health.

There is no update for China, Vietnam, India.

Africa

Chikungunya virus disease:
Ethiopia: According to WHO, since the beginning of the outbreak in July 2019 and as of 29 September, 49 616 cases with no associated deaths have been reported in Dire Dawa city Administration. This is an increase of 18 469 cases since the previous CDTR update.

Dengue:
According to WHO, Senegal reported a case, cases have also been reported by Sudan, and Côte d'Ivoire and Tanzania continue to report cases.

Senegal has reported one case of dengue fever confirmed on 13 September 2019. The case is from Kaolack with onset of

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symptoms reported on 15 August 2019.

In 2019 and as of 15 October 2019, Sudan has reported 135 cases.

Côte d'Ivoire has reported 281 confirmed and 2 920 suspected cases, including two deaths (CFR: 0.1%) as of 24 September 2019. Serotypes 1 and 2 are co-circulating.

Tanzania has reported 6 916 confirmed cases, including 13 deaths (CFR: 0.2%) from 1 August 2018 – 29 September 2019. Since the beginning of the outbreak, the following 11 regions have been affected:
Arusha, Dar es Salaam, Dodoma, Kagera, Kilimanjaro, Lindi, Morogoro, Pwani, Ruvuma, Singida and Tanga.

Réunion has reported 17 981 confirmed dengue cases and 14 deaths from 1 January–15 October 2019. The Regional authorities continue to record a declining trend with about 10 cases reported per week. The most affected areas are in the south and west: Saint-Leu, Saint-Paul, Saint-Pierre, La Possession, Le Tampon and Saint-Louis.

There is no update for Benin, Mayotte, Mauritius.

Australia and the Pacific

Chikungunya virus disease:
No outbreaks have been reported since the previous update.

Dengue:
Cases of dengue are reported by Australia, French Polynesia and New Caledonia; and Marshall Islands have reported an outbreak of dengue.

Australia has reported 1 107 cases of dengue in 2019, which is higher compared with the same period in 2018 (631 cases) but still within seasonal trend.

French Polynesia has reported 1 488 cases of dengue since the beginning of the year and as of 14 October 2019. The cases are reported on the islands of Tahiti, Bora-Bora, Moorea, Nuku-Hiva, Raiatea, Huahine, Rangiroa, Ua Pou, Tahaa and Ua Huka. Both DENV-1 and DENV-2 are circulating.

Marshall Islands have reported 715 cases of dengue, including 207 confirmed cases and one death in 2019 and as of 13 October 2019. The cases were reported due to an outbreak which started on 25 June this year.

New Caledonia has reported 3 898 dengue cases including two deaths since the beginning of the year and as of 26 September 2019. Cases reported weekly continue to decrease. Among the samples serotyped in 2019, the vast majority are DENV-2 and there have been two imported cases of DENV-1 and DENV-4.

N.B: The data presented in this report originate from several sources, both official public health authorities and non-official ones such as news media.
Data completeness depends on the availability of reports from surveillance systems and their accuracy, which varies between countries.
All data should be interpreted with caution as there may be areas of under-reporting; reported figures may not reflect the actual epidemiological situation.

ECDC assessment

Chikungunya virus disease and dengue are endemic in large regions of the intertropical convergence zone. As a precautionary measure, personal protective measures against mosquito bites should be applied.

The detection of autochthonous cases of dengue in France and Spain in 2019 is not unexpected due to the presence of *Aedes albopictus* in the areas where cases have been reported. The risk of further transmission is very low due to low vector activity at this time of year.

ECDC published a rapid risk assessment on the dengue outbreak in Reunion on 18 June 2019 and a rapid risk assessment on autochthonous cases of dengue in Spain and France on 1 October 2019.

Actions

ECDC monitors these threats through epidemic intelligence and reports on a monthly basis. A summary of the worldwide overview of dengue and chikungunya is available on the ECDC website.

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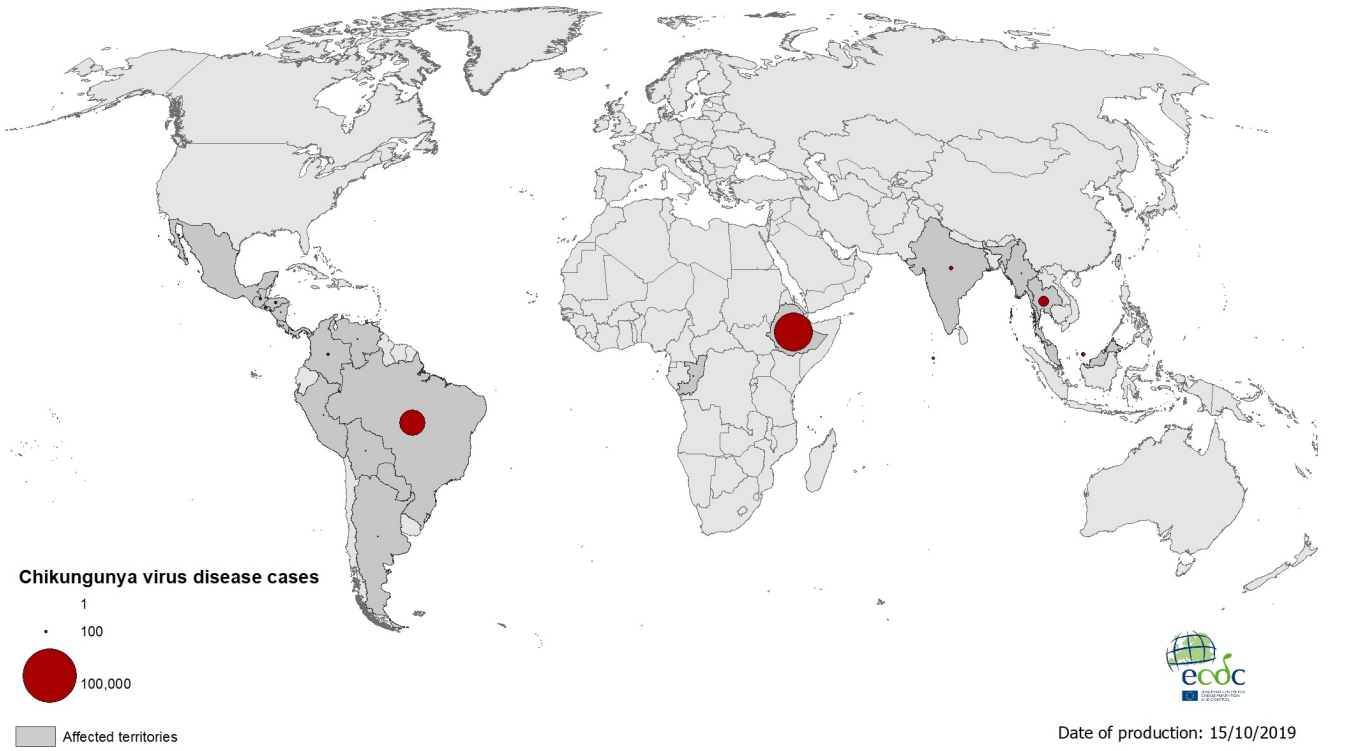
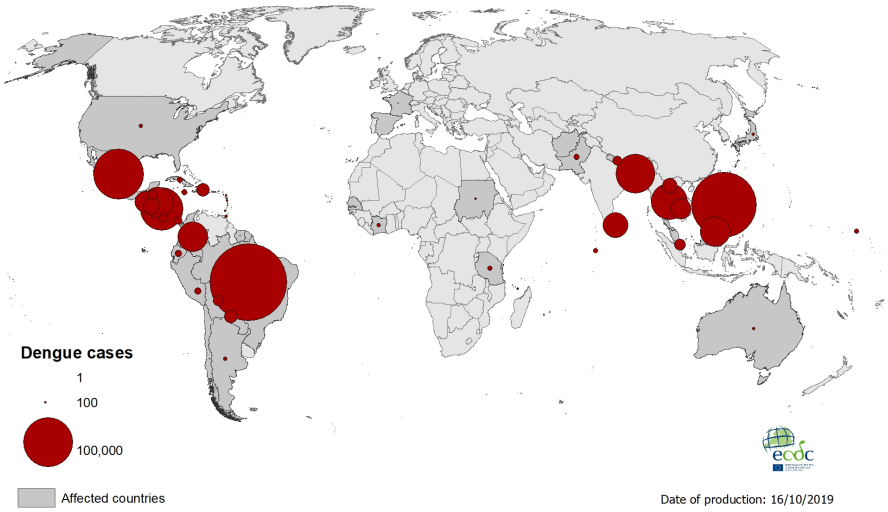
Geographical distribution of chikungunya virus disease cases reported worldwide, August to October 2019

Source: ECDC



Geographical distribution of dengue cases reported worldwide, August to October 2019

Source: ECDC



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

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