WEEKLY BULLETIN

Communicable Disease Threats Report

Week 39, 25 September - 1 October 2022

Disease topics

1. COVID-19 associated with SARS-CoV-2 - Multi-country (EU/EEA) - 2019 - 2022

Overview:

Summary

At the end of week 38, 2022 (week ending 25 September), the pooled EU/EEA notification rate of COVID-19 cases among people aged 65+ years rose by 9% compared with the previous week, driven by recent increases in 14 of the 26 countries reporting data on this indicator. Increases in overall (all-age) pooled EU/EEA notification rates has been reported for two consecutive weeks, with 15 countries reporting an increasing trend. This is the first increase observed across the EU/EEA in these indicators since the most recent BA.5 wave.

Pooled EU/EEA rates of hospital or intensive care unit (ICU) indicators decreased or remained stable. Of the 27 countries reporting data on these indicators, 14 observed an increasing trend in at least one indicator compared with the previous week.

The pooled EU/EEA COVID-19 death rate fell by 20% to 3.9% of the pandemic maximum for this indicator, as part of an eight-week decreasing trend. A total of 926 deaths were reported in week 38.

Among the 14 countries with an adequate volume of sequencing or genotyping for weeks 35–36 (29 August to 11 September 2022), the estimated distribution of variants of concern (VOC) or variants of interest (VOI) was 98.9% (97.0–100.0% from 14 countries) for BA.4/BA.5, 0.8% (0.0–1.8%, 315 detections from 13 countries) for BA.2, 0.8% (0.4–1.9%, 207 detections from six countries) for BA.2.75, and 0.3% (0.1–0.9%, 24 detections from five countries) for BA.2+L452X.

As of week 37, 2022, ECDC is discontinuing the collection and publication of the number of subnational COVID-19 cases reported by EU/EEA countries, as well as publication of the weekly numbers of COVID-19 cases and deaths for the EU/EEA, Western Balkans, and Turkey.

As of week 13, 2022, ECDC discontinued the assessment of each country's epidemiological situation using its composite score, mainly due to changes in testing strategies which affected the reliability of the indicators for all age case rates and test positivity.

As of 20 June 2022, ECDC discontinued the data collection and publication of the number of COVID-19 cases and deaths worldwide. Please refer to World Health Organization (WHO) data on COVID-19 and WHO's Weekly Epidemiological and Weekly Operational Updates page for non-EU/EEA countries.

For the latest COVID-19 country overviews, please see the dedicated web page**.**

Other news:
On 29 September 2022, the Australian Technical Advisory Group on Immunisation (ATAGI) provisionally approved a paediatric dose of Pfizer's COVID-19 vaccine, COMIRNATY (tozinameran), for children aged six months to less than five years. According to ATAGI, this paediatric vaccine is made in the same way as the vaccines for older persons, but it contains a lower amount of active ingredient (three micrograms). ATAGI made this approval after carefully considering data from an ongoing clinical study conducted in the United States, which included over 4 500 participants aged six months to five years. The study demonstrated that the immune response to the vaccine was similar to that seen in children aged five to 12 years, and the safety profile in children was similar to adults with mild side effects observed.

On 28 September 2022, media reported that Indonesia approved its first domestically produced COVID-19 vaccine, 'IndoVac' for emergency use for people above 18 years of age. The vaccine is a protein-based vaccine and has been developed jointly by Indonesia's state-owned pharmaceutical company, Bio Farma and the Baylor College of Medicine in Houston, Texas. According to Bio Farma, it has started the process to get an emergency use approval from the World Health Organization (WHO).

Weekly update on SARS-CoV-2 variants
Since the last update on 22 September 2022 and as of 30 September 2022, no changes have been made to ECDC variant classifications for variants of concern (VOC), variants of interest (VOI), variants under monitoring and de-escalated variants.

For the latest information about variants, please see ECDC's webpage on variants.

Public Health Emergency of International Concern (PHEIC):
On 30 January 2020, the World Health Organization (WHO) declared that the outbreak of COVID-19 constitutes a PHEIC. On 11 March 2020, the Director-General of WHO declared the COVID-19 outbreak a pandemic.
The third, fourth, fifth, sixth, seventh, eighth, ninth, tenth, eleventh and twelfth International Health Regulations (IHR) Emergency Committee meetings for COVID-19 were held in Geneva on 30 April 2020, 31 July 2020, 29 October 2020, 14 January 2021, 15 April 2021, 14 July 2021, 22 October 2021, 13 January 2022, 11 April 2022 and 8 July 2022, respectively. The Committee concluded during these meetings that the COVID-19 pandemic continues to constitute a PHEIC.

ECDC assessment:

For the most recent risk assessment, please visit ECDC's dedicated webpage.

Actions:

On 27 January 2022, ECDC published its Rapid Risk Assessment 'Assessment of the further emergence and potential impact of the SARS-CoV-2 Omicron variant of concern in the EU/EEA, 19th update'.

A dashboard with the latest updates is available on ECDC's website. For the latest update on SARS-CoV-2 variants of concern, please see ECDC's webpage on variants.

2. Ebola virus disease due to Sudan ebolavirus – Uganda – 2022

Overview:

Update: According to WHO, as of 28 September 2022, further three cases of Ebola virus disease (EVD) have been reported, bringing the total number of cases to 50. There are 31 confirmed and 19 probable cases, including 24 deaths. The cases were mainly reported in the Mubende district. However, Kassanda district reported two confirmed and two probable cases, and there are at least three cases in Kyegegwa district.
To date, health officials have identified 414 contacts of cases.

According to the media, WHO and Ugandan health authorities are discussing the possibility of an Ebola Sudan vaccine trial which could begin in a few weeks.

Summary: On 20 September 2022, the Ministry of Health in Uganda, together with WHO AFRO, confirmed an outbreak of EVD due to Sudan ebolavirus in Mubende District, Uganda, after one fatal case was confirmed.
The index case was a 24-year-old man, a resident of Ngabano village of Madudu sub-county in Mubende District. The patient experienced high fever, diarrhoea, abdominal pain, and was vomiting blood since 11 September 2022; he was initially treated for malaria. Samples were collected on 18 September 2022 and EVD was laboratory-confirmed on 19 September. The patient passed away on the same day, five days after hospitalisation.
Deaths were reported mainly from the community and at least five were reported from health facilities, including a death of a healthcare worker. The mean age of confirmed cases is 27 years. There is unconfirmed media information reporting that some suspect cases in isolation have escaped from the isolation centre.

As of 29 September, no cases have been reported in the capital city of Kampala. The Ugandan government has activated a national task force and dispatched a Rapid Response Team to Mubende, Kiboga and Mityana districts and is exercising vigilance in border areas to curb the spread of the disease.

Previously, EVD in Uganda was reported in 2019 due to *Zaire ebolavirus*, which was imported from the Democratic Republic of the Congo. EVD outbreaks caused by *Sudan ebolavirus* have previously occurred in Uganda (four outbreaks) and Sudan (three outbreaks). The last outbreak of EVD due to *Sudan ebolavirus* in Uganda was reported in 2012.

ECDC assessment:

In the context of the current outbreak, the occurrence of additional cases is expected. As there is no approved vaccine against EVD due to *Sudan ebolavirus*, the control of the outbreak should focus on the early detection and isolation of cases. It is unclear if and how much cross-protection the vaccine against EVD due to *Zaire ebolavirus* would provide against EVD due *Sudan ebolavirus*.

Despite uncertainties about the extent of the outbreak, the risk of infection for EU/EEA citizens in relation to this event is currently considered to be very low.

Actions:

ECDC monitors this situation through its epidemic intelligence activities and will report when relevant updates are available.

Source: **Ministry of Health Uganda** , **OCHA**, **Africa CDC**, media (**1**, **2**, **3**,)

3. West Nile virus - Multi-country (World) - Monitoring season 2022

Overview:

Since last week's update, and as of 28 September 2022, European Union (EU) and European Economic Area (EEA) countries reported 77 human cases of West Nile virus (WNV) infection and one death related to WNV infections. Cases were reported by Italy (62), Germany (5), Romania (5), Croatia (2), Hungary (2) and Spain (1). In Greece, 21 cases were diagnosed this week, but these cases are not included in the totals due to delayed reporting to ECDC, and will be included next week. One death was reported by Romania. EU-neighbouring countries reported 18 human cases of WNV infection and no deaths related to WNV infections. Cases were reported by Serbia (18). This week, among the reporting countries, the following NUTS 3 or GAUL1 regions have reported human cases of WNV infection for the first time: Biella and Cagliari in Italy.

This week, among the reporting countries, the following NUTS 3 or GAUL1 regions have reported human cases of WNV infection for the first time since the start of this season: Berlin and Saalekreis in Germany, Zagrebacka županija in Croatia, Szabolcs-Szatmár-Bereg in Hungary, Biella and Cagliari in Italy and Sibiu in Romania.
Since the beginning of the 2022 transmission season and as of 28 September 2022, EU/EEA countries have reported 851 human cases of WNV infection in Italy (536), Greece (231), Romania (43), Hungary (14), Germany (8), Croatia (8), Austria (6), Spain (4) and Slovakia (1). EU/EEA countries have reported 53 deaths in Italy (28), Greece (20) and Romania (5). EU-neighbouring countries have reported 187 human cases of WNV infection in Serbia (187) and eight deaths in Serbia (8).

During the current transmission season, within the reporting countries, human cases of WNV infection were reported from 97 different NUTS 3 or GAUL 1 regions, of which the following regions reported human cases of WNV infection for the first time: Harz and Vogtlandkreis in Germany, Pistoia, Lucca, Monza e della Brianza, Biella and Cagliari in Italy, Brasov in Romania, Moravicki in Serbia and Tarragona in Spain.

Since the beginning of the 2022 transmission season, 62 outbreaks among equids and 238 outbreaks among birds have been reported by EU/EEA countries. Outbreaks among equids have been reported by Italy (36), Germany (9), Greece (4), Spain (4), Croatia (4), France (2), Hungary (2) and Austria (1). Outbreaks among birds have been reported by Italy (191), Germany (41), Spain (4), Austria (1) and Hungary (1).

ECDC links: West Nile virus infection webpage

Sources: TESSy | Animal Disease Information System

ECDC assessment:

During the current transmission season and as of 28 September 2022, human cases of WNV were reported from countries that had reported WNV infections in previous years.
There were two regions, Biella and Cagliari in Italy, that reported human cases of WNV infection for the first time this week.

Two EU/EEA countries and one EU-neighbouring country have reported relatively high numbers of human WNV infection cases so far this year. At this stage in the season, the number of cases in Italy and Greece is comparable with those observed in the peak epidemic year, 2018. The number of cases in Serbia is lower than reported at this stage in the season in 2018, but higher than reported in other years in the past decade at this stage in the season. In accordance with Commission Directive 2014/110/EU, prospective blood donors should be deferred for 28 days after leaving a risk area for locally-acquired WNV infection, unless the result of an individual nucleic acid test is negative.

Actions:

During transmission seasons, ECDC publishes a set of WNV transmission maps, a dashboard, and an epidemiological summary every Friday.

Further information:

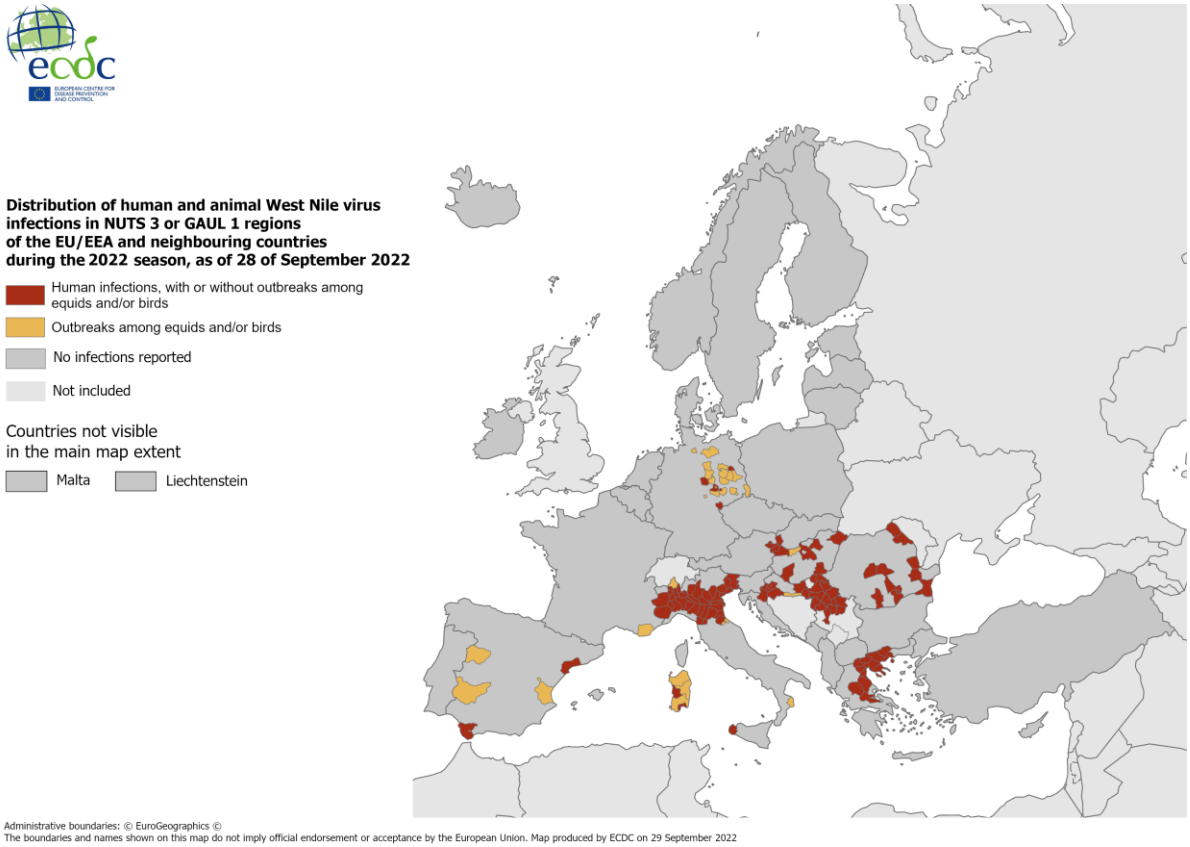
Data on human cases are collected via The European Surveillance System (TESSy) which is managed by ECDC. Only locally-acquired cases with known place of infection are included in this report. The following EU-neighbouring countries report human cases of WNV infection to ECDC: Albania, Kosovo*, Montenegro, North Macedonia, Serbia, and Turkey.

Animal data (i.e. outbreaks among equids and birds) are collected through the Animal Disease Information System (ADIS) of the European Commission. Reporting of WNV in equids and birds is mandatory at the EU/EEA level. The distribution of human infections covers EU/EEA and EU-neighbouring countries, whereas the distribution of outbreaks among equids and birds only relates to EU/EEA countries.

** This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence*

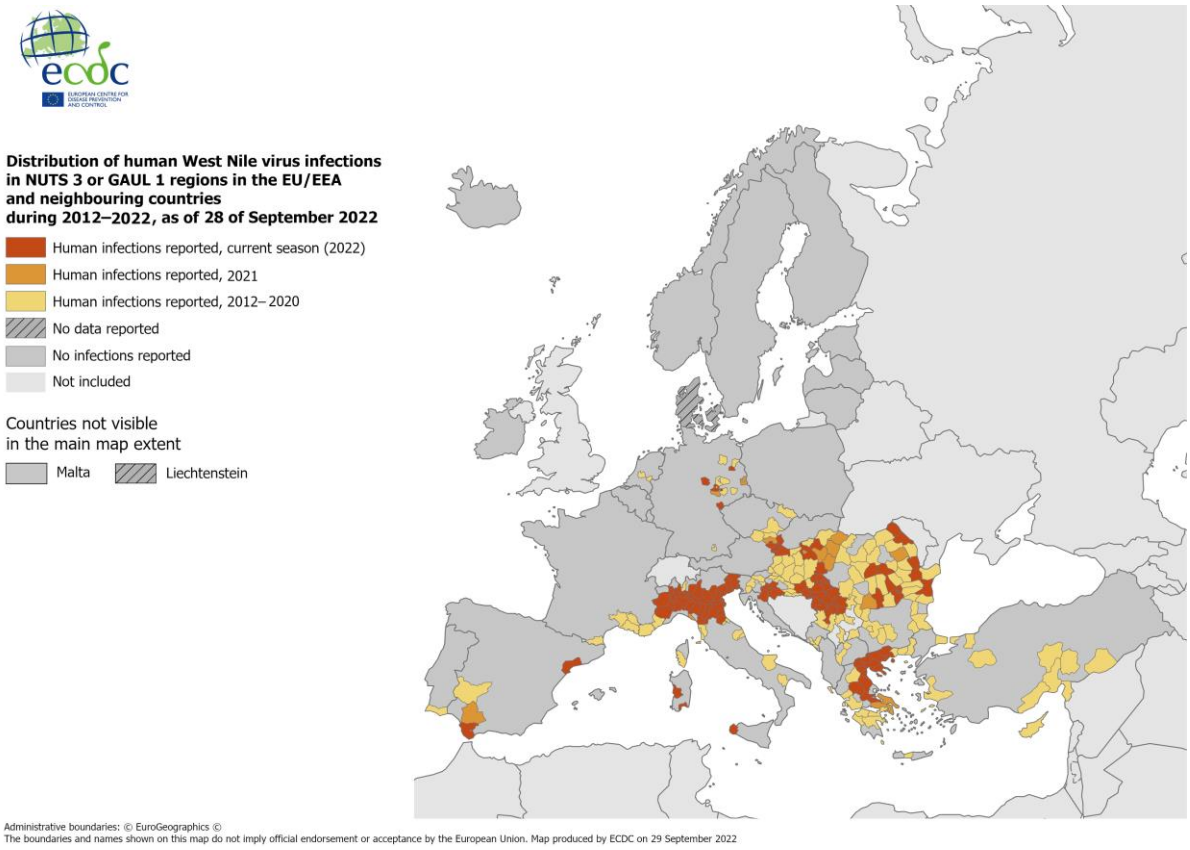
Maps and graphs

Figure 1. Distribution of West Nile virus infections among humans and outbreaks among equids and/or birds in the EU as of 28.09.2022



Source: ECDC and ADIS

Figure 2. Distribution of human West Nile virus infections by affected areas as of 28.09.2022



Source: ECDC

4. Monkeypox - Multi-country - 2022

Overview:

Update:
Since the last update on 20 September 2022, and as of 27 September 2022, 122 monkeypox cases have been reported from 16 EU/EEA countries: Spain (31), Germany (27), France (17), Belgium (8), Austria (6), Sweden (6), Ireland (5), Poland (5), Portugal (4), Greece (3), Italy (3), Denmark (2), Norway (2), Finland (1), Latvia (1) and Romania (1).

Since early May 2022, cases of monkeypox have been reported from countries where the disease is not endemic. Most cases are in men, self-identifying as men who have sex with men (MSM). The clinical presentation is generally described to be mild, with most cases presenting with lesions on the genitalia or peri-genital area, indicating that transmission probably occurred through close physical contact during sexual activities.

Summary:
EU/EEA
Since the start of the monkeypox outbreak and as of 27 September 2022, 20 083 confirmed cases of monkeypox (MPX) have been reported from 29 EU/EEA countries: Spain (7 149), France (3 969), Germany (3 607), Netherlands (1 223), Portugal (851), Italy (846), Belgium (770), Austria (309), Sweden (192), Poland (188), Denmark (185), Ireland (183), Norway (91), Hungary (77), Greece (74), Czechia (66), Luxembourg (55), Slovenia (46), Finland (40), Romania (40), Malta (33), Croatia (29), Iceland (14), Slovakia (14), Estonia (11), Bulgaria (6), Cyprus (5), Latvia (5) and Lithuania (5). Deaths have been reported from: Spain (2), Belgium (1) and Czechia (1).

Deaths have been reported from: Spain (2), Belgium (1) and Czechia (1).

Western Balkans and Turkey:
Since the start of the monkeypox outbreak and as of 27 September 2022, the following Western Balkan countries have reported confirmed cases of monkeypox: Serbia (40), Bosnia and Herzegovina (5) and Montenegro (2). In addition, 11 cases have been reported from Turkey.

Disclaimer: Data presented in this update are compiled from TESSy and official public sources.

A detailed summary and analysis of data reported to TESSy can be found in the weekly Joint ECDC-WHO Regional Office for Europe Surveillance Bulletin.

Public Health Emergency of International Concern (PHEIC): On 23 July 2022, the Director-General of World Health Organization declared the global monkeypox outbreak a Public Health Emergency of International Concern (PHEIC).

ECDC assessment:

Monkeypox (MPX) does not easily spread between people. Human-to-human transmission of MPX occurs through close contact with infectious material from the skin lesions of an infected person, through respiratory droplets in prolonged face-to-face contact, and through fomites.

In the current outbreak in non-endemic countries, cases of MPX continue to be primarily identified among groups of men who have sex with men (MSM) aged 18–50 years. Particular sexual practices are very likely to have facilitated – and could further facilitate – the transmission of MPX among MSM groups. Despite the current focus of circulation of the MPX virus (MPXV) among groups of MSM with multiple partners, transmission may occur in other population groups. During the current outbreak, cases have mainly presented with mild to-moderate symptoms. Only a few severe cases (including encephalitis) leading to hospitalisations and four deaths have been reported by Spain (2), Belgium (1), and Czechia (1). The severity of MPX may be higher among young children, pregnant women, and immunocompromised individuals.

Based on ECDC's epidemiological assessment, the likelihood of MPX spreading further in networks of people with multiple sexual partners in the EU/EEA is considered high, and the likelihood of MPX spreading among the broader population is assessed as very low. Although a few severe cases have been reported (including encephalitis), for most cases the impact of the disease remains low. The overall risk is therefore assessed as moderate for people having multiple sexual partners (including some groups of MSM) and low for the broader population. The risk of the establishment of an enzootic cycle in the EU/EEA and spill-over events to humans is considered low.

Early diagnosis, isolation, effective contact tracing, and vaccination strategies are key for the effective control of this outbreak. It is essential to underpin all response measures with strong risk communication and community engagement efforts, as well as awareness and educational activities for health professionals. At this point, mass vaccination for MPX is not required or recommended. Unless contact tracing can successfully identify a high proportion of infected contacts, mathematical modelling results indicate that targeted primary preventive (pre-exposure) vaccination (PPV) of individuals at high risk of exposure would be the most effective strategy for controlling the outbreak. PPV would also be the most efficient strategy when there is less effective tracing. Therefore, prioritising groups of MSM at higher risk of exposure, as well as front-line staff with a risk of occupational exposure, should be considered in developing vaccination strategies. Targeted national vaccination programmes should be implemented within a framework of collaborative research and clinical trial protocols with standardised data collection tools for clinical and outcome data.

To date, the recommendations regarding contact with animals remain unchanged. People infected with monkeypox should apply common precautionary measures such as avoiding contact with animals during the isolation period. Front-line veterinarians (at veterinary clinics and hospitals) should be cautious when dealing with pets that live in a household with people who are infected and should remain alert. People affected by monkeypox who suspect that their pet shows compatible clinical signs should inform their veterinary practitioner/clinic. If necessary, they in turn will alert the relevant national authorities, who will provide advice on the measures to take. More information on monkeypox in animals is available on EFSA's website.

Actions:

ECDC continues to monitor this event through its epidemic intelligence activities and reports relevant news on an ad-hoc basis. Multilateral meetings between affected countries, WHO's Regional Office for Europe, and ECDC have taken place to share information and coordinate the response. A process in EpiPulse has been created to allow countries to share information with one another, WHO, and ECDC.

A rapid risk assessment, 'Monkeypox Multi-country outbreak', was published on 23 May 2022, and an update of the rapid risk assessment was published on 8 July 2022. For the latest updates, visit ECDC's monkeypox page. ECDC is also offering laboratory support to Member States and collaborating with stakeholders on risk communication activities, such as targeted messaging for the general public and MSM communities. It has also provided guidance to countries hosting events during the summer. ECDC is also providing guidance on clinical sample storage and transport, case and contact management and contact tracing, IPC guidance, cleaning and disinfection in healthcare settings and households, and vaccination approaches.

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

Overview:

Chikungunya virus disease: In 2022, and as of 23 September, 303 655 cases and 60 deaths have been reported. The majority of cases have been reported from Brazil (229 683), India (69 398), Guatemala (1 360), Malaysia (599) and Thailand (564). Deaths have been reported from Brazil (58), Kenya (1) and the Philippines (1). Since the previous CDTR published on week 34 2022, 74 626 new cases and 19 new deaths have been reported. The five countries reporting most new cases are India (45 120), Brazil (29 188), Philippines (329), Thailand (140) and Malaysia (71). New deaths have been reported from Brazil (18) and Philippines (1).

Dengue: In 2022, and as of 23 September, 2 973 925 cases and 2 383 deaths have been reported. The majority of cases have been reported from Brazil (2 073 007), Vietnam (190 005), Philippines (128 346), Indonesia (68 903) and Peru (58 123). The majority of deaths have been reported from Brazil (864), Vietnam (72), Philippines (422), Indonesia (640) and Peru (75). Since the previous CDTR published on week 34 2022, 376 857 new cases and 318 new deaths have been reported. The five countries reporting most new cases are Brazil (162 350), Philippines (45 749), Vietnam (44 469), India (20 455) and Nicaragua (15 976). The five countries reporting most new deaths are Brazil (90), Philippines (103), Bangladesh (38), Vietnam (19), India (9).

In the EU and as of 23 September 2022, 47 autochthonous dengue cases have been reported in France. (14).

Chikungunya virus disease

Europe

No autochthonous cases of chikungunya virus disease have been reported in Europe in 2022.

Americas and the Caribbean

Bolivia: In 2022 and as of 13 August, 155 cases, including 11 confirmed cases and no deaths have been reported.
Brazil: In 2022 and as of 27 August, 229 683 cases, including 110 391 confirmed cases and 58 deaths have been reported. This is an increase of 29 188 cases and 18 deaths since 30 July 2022.
Colombia: In 2022 and as of 10 September, 50 cases and no deaths have been reported.
Costa Rica: In 2022 and as of 3 September, 10 cases and no deaths have been reported. This is an increase of three cases since 30 July 2022.
El Salvador: In 2022 and as of 3 September, 134 cases and no deaths have been reported. This is an increase of 25 cases since 6 August 2022.
Guatemala: In 2022 and as of 3 September, 1 360 cases, including 14 confirmed cases and no deaths have been reported. This is an increase of 30 cases since 30 July 2022.
Honduras: In 2022 and as of 3 September, 37 cases and no deaths have been reported. This is an increase of two cases since 16 July 2022.
Mexico: In 2022 and as of 3 September, one cases, including one confirmed case and no deaths have been reported.
Nicaragua: In 2022 and as of 17 September, four cases and no deaths have been reported.
Paraguay: In 2022 and as of 10 September, 408 cases, including 155 confirmed cases and no deaths have been reported.
Peru: In 2022 and as of 10 September, 246 cases, including 232 confirmed cases and no deaths have been reported. This is an increase of 21 cases since 13 August 2022.
Venezuela: In 2022 and as of 10 September, 28 cases and no deaths have been reported. This is an increase of two cases since 30 July 2022.

Asia
India: In 2022 and as of 31 August, 69 398 cases, including 3 429 confirmed cases and no deaths have been reported. This is an increase of 45 120 cases since 31 May 2022.
Malaysia: In 2022 and as of 3 September, 599 cases and no deaths have been reported. This is an increase of 71 cases since 9 July 2022.
Philippines: In 2022 and as of 3 September, 478 cases and one death have been reported. This is an increase of 329 cases and one death since 11 June 2022.
Thailand: In 2022 and as of 16 September, 564 cases and no deaths have been reported. This is an increase of 140 cases since 19 August 2022.

Africa
Ethiopia: In 2022 and as of 8 May, 311 cases, including three confirmed cases and no deaths have been reported.
Kenya: In 2022 and as of 30 July, 189 cases, including five confirmed cases and one death have been reported.

Australia and the Pacific
No cases of chikungunya virus disease have been reported in Australia and the Pacific in 2022.

Dengue
Europe
France: In 2022, France has reported five outbreaks with a total of 47 locally-acquired cases of dengue.

In Occitania region:
- One case in Perpignan, Pyrénées-Orientales with onset of symptoms in mid-June 2022.
- Four cases in Andrest (*situated close to Tarbes*) and Rabastens (*30km from Toulouse*), Hautes-Pyrénées with onset of symptoms in July-August 2022.
- Four cases in Salvetat Saint Gilles *(situated close to Toulouse)* among a household with onset of symptoms in the second half of August 2022.

In Provence-Alps-Cote d'Azur region:
- Seven cases in Fayence, Var with onset of symptoms between end of June and end of July 2022.
- Twenty-nine cases in St Jeannet, Gattières, and Gaude (*situated close to Nice*), Alpes-Maritime with onset of symptoms in August-September 2022. In addition, two cases in Saint Laurent du Var, another commune close to Nice, have been identified. Investigations are ongoing to define if all these cases are part of the same cluster.

The outbreaks in Perpignan and in Fayence are now considered to be over. For the other outbreaks, additional cases might be detected.

Americas and the Caribbean
In 2022 and as of 23 September, the WHO Pan American Health Organization (PAHO) reported 2 347 581 dengue cases, including 1 178 984 confirmed cases and 1 043 associated deaths, in the Americas. The five countries reporting most cases are: Brazil (2 073 007), Peru (58 123), Nicaragua (53 345), Colombia (45 731), and Mexico (24 322). This is an increase of 206 341 cases and 116 deaths since 23 August 2022.
All four dengue virus serotypes (DENV 1, DENV 2, DENV 3, and DENV 4) are currently circulating in the Americas. The figures for each country of the Americas region can be found on the PAHO Health Information Platform.
Dengue fever surveillance indicators are at low levels or even zero in the French Antilles (Guadeloupe, Martinique, Saint-Martin, and Saint-Barthélemy).

Asia
Afghanistan: In 2022 and as of 17 September, 117 cases and no deaths have been reported. This is an increase of 40 cases since 13 August 2022.
Bangladesh: In 2022 and as of 18 September, 23 161 cases and 60 deaths have been reported. This is an increase of 12 118 cases and 38 deaths since 14 August 2022.
Cambodia: In 2022 and as of 8 September, 6 141 cases and 11 deaths have been reported. This is an increase of 2 819 cases and two deaths since 14 July 2022.
China: In 2022 and as of 31 July, eight cases and no deaths have been reported. This is an increase of three cases since 31 May 2022.
India: In 2022 and as of 31 August, 30 627 cases and 12 deaths have been reported. This is an increase of 20 455 cases and nine deaths since 31 May 2022.
Indonesia: In 2022 and as of 22 August, 68 903 cases and 640 deaths have been reported.
Laos: In 2022 and as of 31 July, 13 621 cases and 14 deaths have been reported. This is an increase of 7 228 cases and four deaths since 14 July 2022.
Malaysia: In 2022 and as of 13 August, 33 911 cases and 22 deaths have been reported.

Maldives: In 2022 and as of 11 September, 590 cases and no deaths have been reported. This is an increase of 246 cases since 31 May 2022.
Nepal: In 2022 and as of 15 September, 13 007 cases and 13 deaths have been reported. This is an increase of 12 312 cases and 13 deaths since 21 August 2022.
Oman: In 2022 and as of 7 April, 76 cases and no deaths have been reported.
Pakistan: In 2022 and as of 15 September, 3 830 cases and nine deaths have been reported. This is an increase of 2 023 cases and nine deaths since 20 August 2022.
The **Philippines**: In 2022 and as of 20 August, 128 346 cases and 422 deaths have been reported. This is an increase of 45 749 cases and 103 deaths since 16 July 2022.
Singapore: In 2022 and as of 21 September, 27 283 cases and no deaths have been reported. This is an increase of 2 344 cases since 20 August 2022.
Sri Lanka: In 2022 and as of 22 September, 46 701 cases and no deaths have been reported. This is an increase of 5 910 cases since 22 August 2022.
Thailand: In 2022 and as of 21 September, 19 484 cases and no deaths have been reported. This is an increase of 5 844 cases since 19 August 2022.
Timor-Leste: In 2022 and as of 27 May, 4 985 cases and 56 deaths have been reported.
Vietnam: In 2022 and as of 4 September, 190 005 cases and 72 deaths have been reported. This is an increase of 44 469 cases and 19 deaths since 6 August 2022.

Africa
Côte d'Ivoire: In 2022 and as of 19 March, 12 confirmed cases and one death have been reported.
Kenya: In 2022 and as of 28 April, 33 cases, including 32 confirmed cases and no deaths have been reported.
Réunion: In 2022 and as of 14 September, 1 129 cases and one death have been reported.
São Tomé and Príncipe: In 2022 and as of 10 September, 993 cases and three deaths have been reported. This is an increase of 62 cases and one death since 7 August 2022.

Australia and the Pacific
Australia: In 2022 and as of 8 September, 127 cases and no deaths have been reported. This is an increase of 61 cases since 14 July 2022.
Cook Islands: In 2022 and as of 28 May, three cases and no deaths have been reported.
Fiji: In 2022 and as of 16 May, 1 960 cases and no deaths have been reported.
Micronesia (Federated States of): In 2022 and as of 4 June, 16 cases and no deaths have been reported.
New Caledonia: In 2022 and as of 30 June, one confirmed case and no deaths have been reported.
Palau: In 2022 and as of 14 July, 22 cases and no deaths have been reported.
Samoa: In 2022 and as of 12 February, five cases and no deaths have been reported.
Solomon Islands: In 2022 and as of 7 May, 34 cases and no deaths have been reported.
Vanuatu: In 2022 and as of 16 June, 39 cases and no deaths have been reported.
Wallis and Futuna: In 2022 and as of 16 June, 21 cases and no deaths have been reported.

N.B: The data presented in this report originate from several sources, both official public health authorities and non-official sources 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. Please note that case definitions may differ between countries and comparisons should be made with caution.

ECDC assessment:

Chikungunya virus disease and dengue affect people in most countries of the tropics and sub-tropics. EU/EEA citizens travelling to the affected areas should apply personal protective measures against mosquito bites.

The likelihood for onward transmission of dengue and chikungunya virus disease in mainland EU/EEA is, among other things, linked to importation of the virus by viraemic travellers into receptive areas with established and active competent vectors (i.e. ***Aedes albopictus***). *Aedes albopictus* is **established** in a large part of Europe. The current likelihood of the occurrence of local transmission events of chikungunya virus and dengue virus in mainland EU/EEA is high, as the environmental conditions are favourable to vector activity and virus replication. All autochthonous outbreaks of **chikungunya virus disease** and **dengue** in mainland EU/EEA have so far occurred between June and November.

The occurrence of five clusters in France, including a cluster of over 20 cases, is unusual, but not unexpected. To date, all dengue clusters in Europe were of limited size (up to 10 cases). The current likelihood of local transmission of dengue virus occurring in mainland EU/EEA is high, as the environmental conditions are favourable for the growth of mosquito populations and virus replication in the vector, which has high vector abundance during the summer and early autumn.

It is expected that additional cases will be detected in France in the coming weeks among the ongoing clusters and possibly new clusters.

Given the high number of foreign tourists visiting southern France during the summer period, detection of cases among returning travellers can be expected. Travellers returning from areas where dengue fever transmission occurs (in France and any other country) should be advised to seek medical care if they develop symptoms consistent with dengue fever, in particular if they return to areas where *Ae. albopictus* is established, in order to reduce the risk of the virus being introduced into the local mosquito population and prevent further local transmission.

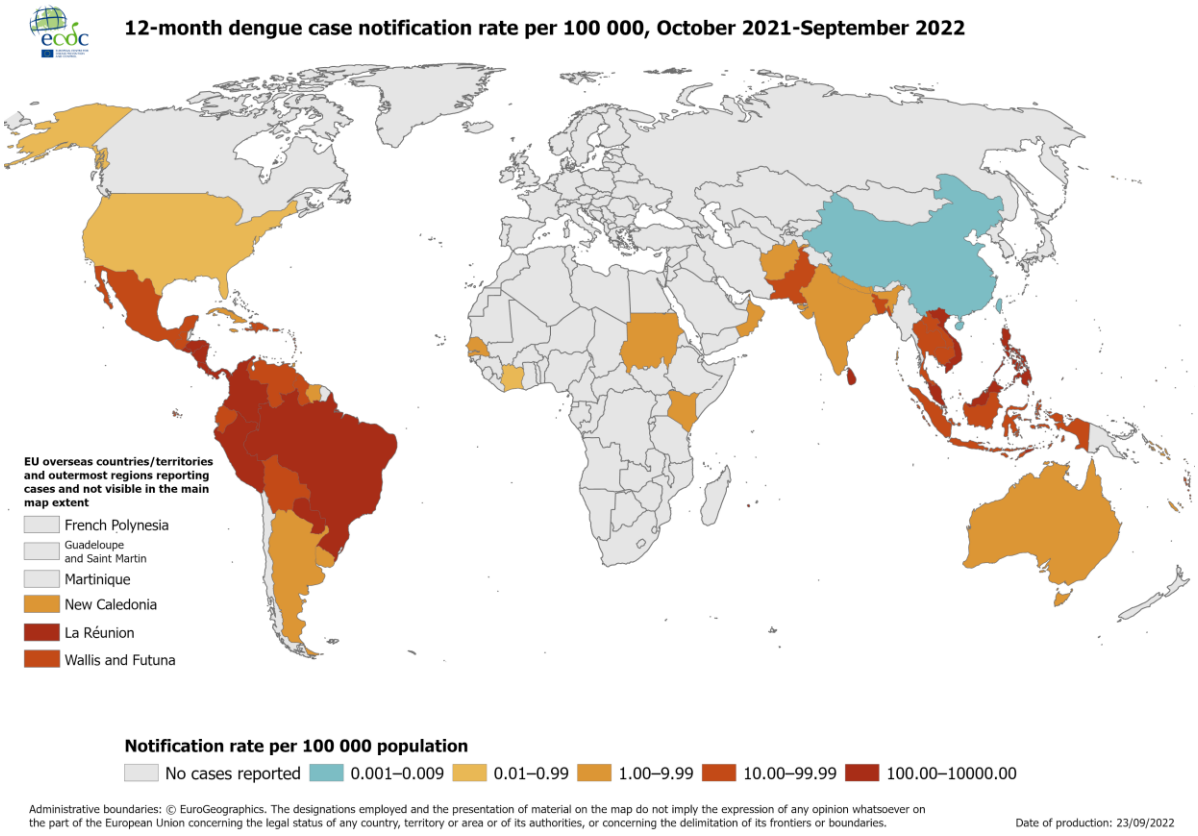
More information is available on ECDC's webpages on autochthonous transmission of chikungunya and dengue virus in the EU/EEA, as well as on ECDC's dengue and chikungunya factsheets.

Actions:

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

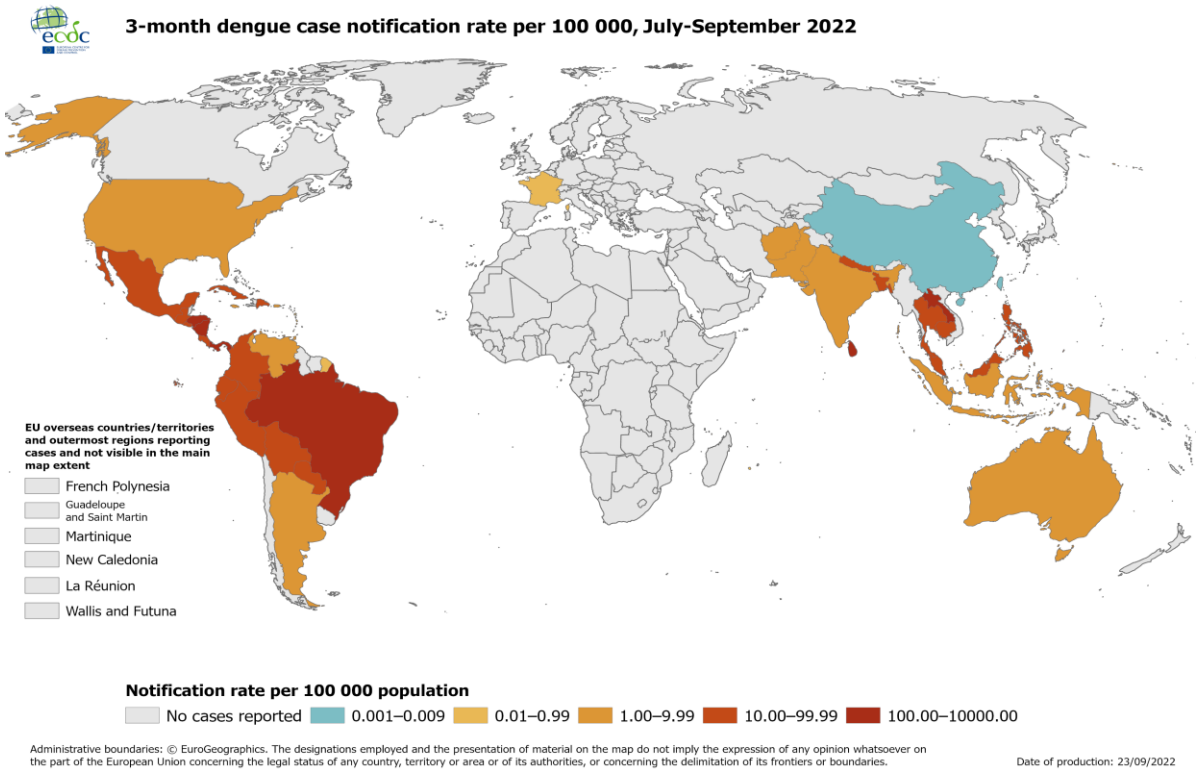
Maps and graphs

Figure 3. 12-month dengue case notification rate per 100 000 October 2021–September 2022



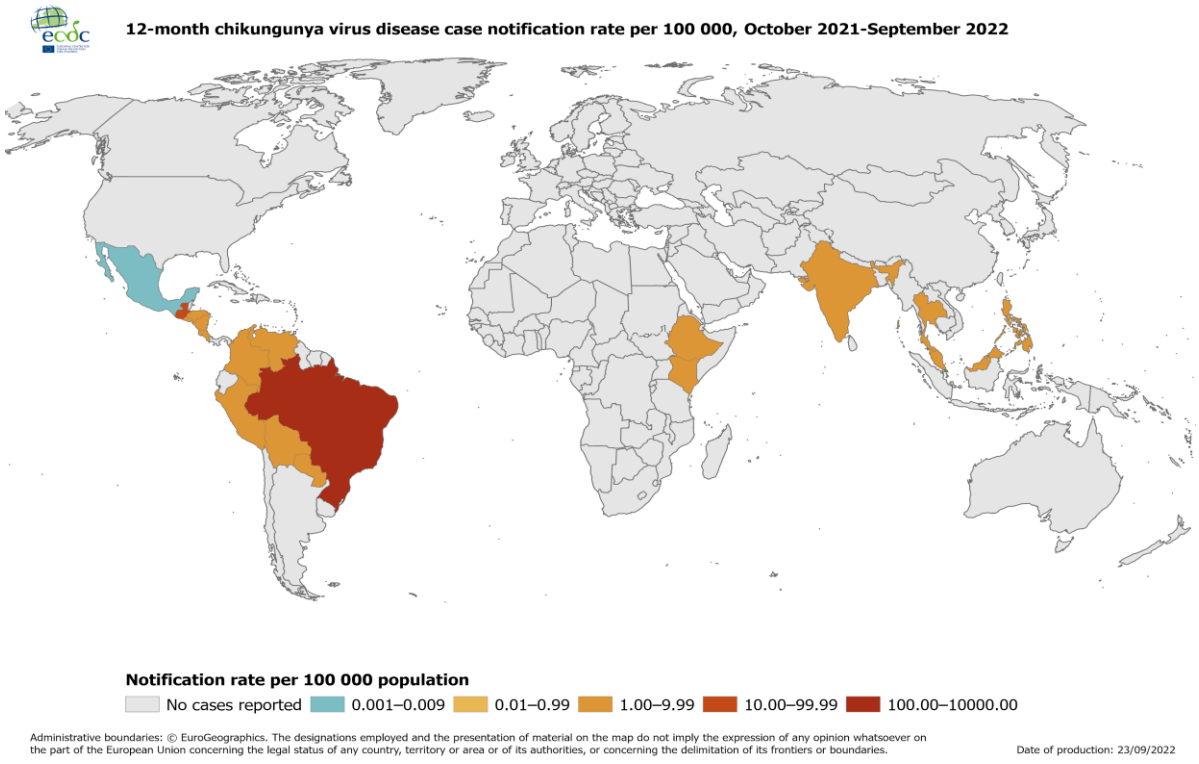
Source: ECDC

Figure 4. 3-month dengue case notification rate per 100 000 July–September 2022



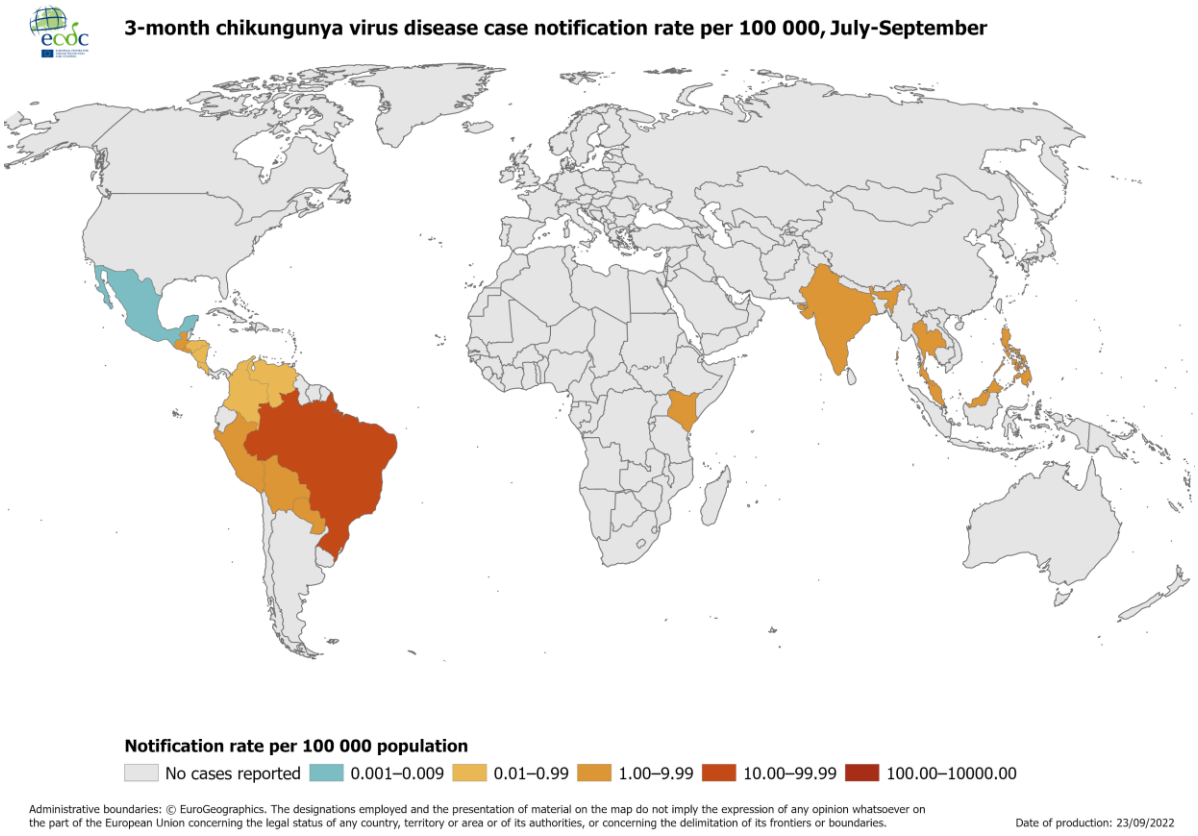
Source: ECDC

Figure 5. 12-month chikungunya virus disease case notification rate per 100 000 October 2021–September 2022



Source: ECDC

Figure 6. 3-month chikungunya virus disease case notification rate per 100 000 July–September 2022



Source: ECDC

6. Influenza A(H5N6) - Multi country - Monitoring human cases

Overview:

Update: As of 26 September 2022 and since the last case reported in a monthly update on 12 July 2022, one new human case with avian influenza A(H5N6) virus infection was reported in China. The patient was a 6-year-old girl living in Nanning, Guangxi province in China. She developed symptoms on 30 July and was hospitalised in critical condition on 3 August. The case had exposure to live poultry market prior to the onset of symptoms.

Summary: To date, overall, 81 laboratory confirmed cases, including 33 deaths (CFR: 40%)) of human infection with influenza A(H5N6) virus, have been reported since 2014. Most of these cases were reported from China (80) and one from Laos.

ECDC assessment:

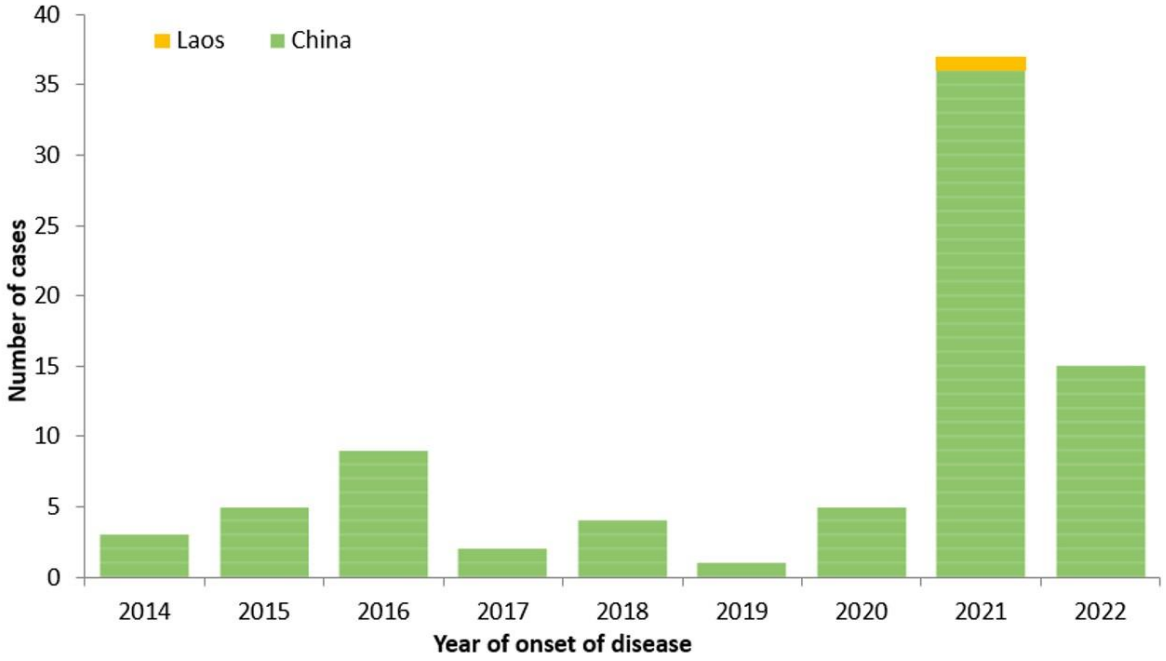
Sporadic human cases of avian influenza A(H5N6) have been previously observed. No human-to-human transmission has been reported so far. Sporadic zoonotic transmission cannot be excluded; the use of personal protective measures for people directly exposed to potentially infected poultry and birds with avian influenza viruses will minimise the remaining risk. The risk of zoonotic influenza transmission to the general public in EU/EEA countries is considered to be very low.

Actions:

ECDC monitors avian influenza strains through its epidemic intelligence activities, disease experts and in collaboration with EFSA and the EU reference laboratory, in order to identify significant changes in the epidemiology of the virus. ECDC, together with EFSA and the EU reference laboratory for avian influenza, produces a quarterly updated report of the avian influenza situation. The next report will be published on 3 October 2022.

Maps and graphs

Figure 7. Distribution of confirmed human cases of avian influenza A(H5N6) virus infection by year of onset and country, 2014-2022 (n=81)



Source: ECDC

7. Influenza A(H9N2) - Multi-country (World) - Monitoring human cases

Overview:

Update: As of 26 September 2022 and since the last case reported in a monthly update on 12 July 2022, one new case of human infection with avian influenza A(H9N2) has been reported from China. The case is a 1-year-old boy from Guangdong province with onset of symptoms on 1 August 2022.

Summary: To date, and since 1998 a total of 114 laboratory-confirmed cases, including two deaths, of human infection with avian influenza A(H9N2) viruses have been reported, from China (101), Egypt (4), Bangladesh (3), Cambodia (2), Oman (1), Pakistan (1), India (1), and Senegal (1). Most of the cases were children with mild disease.

Source: Hong Kong Centre for Health Protection, Avian Influenza Report

ECDC assessment:

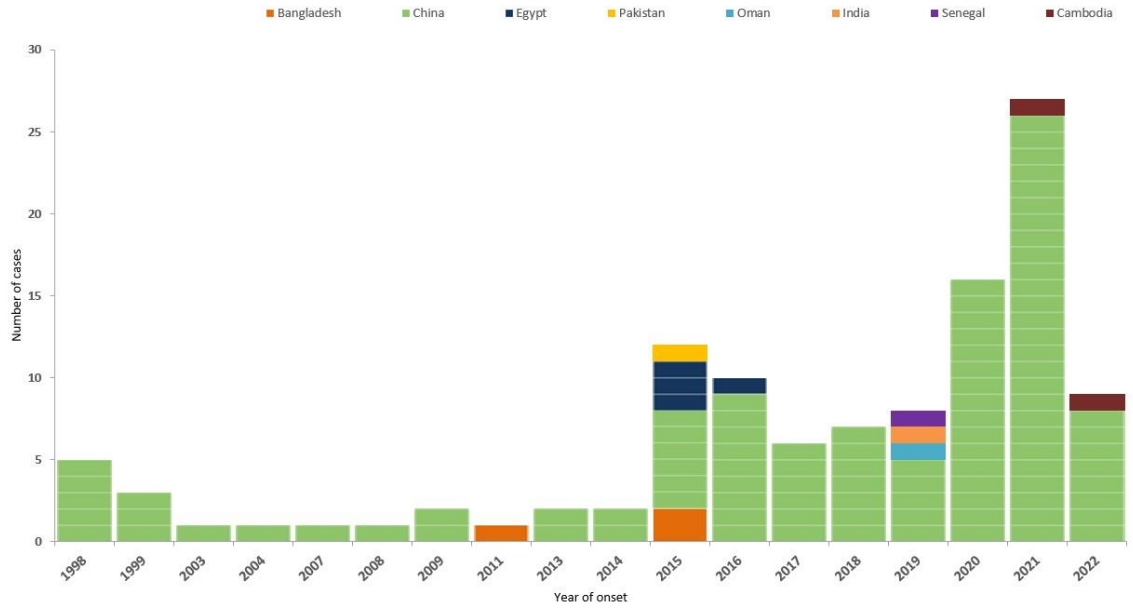
Sporadic human cases of avian influenza A(H9N2) have been observed, but no cases of human-to-human transmission have been documented. The use of personal protective measures for people directly exposed to poultry and birds potentially infected with avian influenza viruses will minimise the risk of infection. The risk of zoonotic influenza transmission to the general public in EU/EEA countries is considered to be very low as relevant H9N2 viruses are not circulating in the poultry population or present in wild birds in Europe.

Actions:

ECDC monitors avian influenza strains through its epidemic intelligence activities, the disease expert and in collaboration with EFSA and the EU reference laboratory in order to identify significant changes in the epidemiology of the virus. ECDC, together with EFSA and the EU reference laboratory for avian influenza, produces a quarterly updated report on the avian influenza situation. The next report will be published on 3 October 2022.

Maps and graphs

Figure 8. Distribution of confirmed human cases of avian influenza A(H9N2) virus infection by year of onset and country, 1998-2022 (updated on 26 September, n=114)



Source: ECDC

8. Influenza A(H10N3) - China - 2021

Overview:

Update: As of 26 September 2022 and since the last case reported in China on 1 June 2021, one new case of human infection with avian influenza A(H10N3) was reported to WHO in the Western Pacific Region.

Summary: To date, two cases of avian influenza A(H10N3) virus have been reported globally. The first case was reported in Jiangsu Province, China, in 2021 in a 41-year-old male. He developed symptoms on 23 April 2021 and was hospitalised on 28 April due to his critical condition but eventually recovered. No positive close contacts were identified.

Sources: National Health Commission of the People's Republic of China | The Government of the Hong Kong Special Administrative Region

ECDC assessment:

Sporadic human cases of avian influenza A(H10N3) have been observed, but no cases of human-to-human transmission have been documented. The use of personal protective measures for people directly exposed to poultry and birds potentially infected with avian influenza viruses will minimise the risk of infection. The risk of zoonotic influenza transmission to the general public in EU/EEA countries is considered to be very low.

Actions:

ECDC monitors avian influenza strains through its epidemic intelligence activities, disease experts and in collaboration with EFSA and the EU reference laboratory in order to identify significant changes in the epidemiology of the virus. ECDC, together with EFSA and the EU reference laboratory for avian influenza, produces a quarterly updated report of the avian influenza situation. The next report will be published on 3 October 2022.

9. Human cases of swine influenza A(H1N1) variant virus - Multi-country - 2022

Overview:

Update: On 16 September 2022, one human infection with Eurasian avian-like A(H1N1) swine influenza virus was reported in China.

Summary: To date, a total of six cases of human infection with Eurasian avian-like A(H1N1) swine influenza virus have been officially reported from China to WHO since October 2021.

ECDC assessment:

Sporadic human cases infected with an influenza virus of swine origin have been reported from several countries in the EU/EEA and are not unexpected. Exposure to pigs or pig products have been reported in the past and represent the most common risk factor. Transmission events have also been observed in healthy people without underlying conditions. The cases need to be followed up to identify human-to-human transmission and implement control measures. Viruses from patients in a severe condition and an influenza-positive test should be further characterised, as well as shared with the national influenza reference laboratories and WHO Collaborating Centres.

ECDC published a Threat Assessment Brief on Eurasian avian-like A(H1N1) swine influenza viruses in July 2020.

Actions:

ECDC monitors zoonotic influenza events through its epidemic intelligence activities and the disease expert in order to identify significant changes in the epidemiology of the virus. Cases should be reported immediately to EWRS and IHR.

10. Human cases with swine influenza A(H1N2) variant virus - Multi country - 2022

Overview:

Update: as of 26 September 2022, five cases of influenza variant A(H1N2)v virus human infection have been reported in the US since August 2022. The first case was reported on 19 August 2022 in Oregon, followed by one case in Ohio on 26 August, one case in Michigan on 13 September, one case in Wisconsin on 19 September, and one case in Georgia on 23 September. The five infections occurred in people under 18 years, of whom three attended agricultural fairs and two had direct contact with pigs. None of the cases were hospitalised. One household contact of a case from Michigan, who also attended the same agricultural fair, developed respiratory symptoms. To date, no human-to-human transmission has been detected.

As a result of these influenza variant virus human infections, on 30 August, the US CDC issued a Health Alert Network (HAN) Health Advisory giving recommendations for identification, treatment, and prevention for summer and fall 2022.

Summary: Globally, in 2022 and as of 26 September 2022, five influenza variant A(H1N2)v virus human infections with a H1N2 virus that usually circulates among the pig population in the US have been reported. In 2021, overall, twelve cases were reported with influenza variant A(H1N2)v virus human infection in Austria (2), Canada (2), China (1), France (2) and the US (5).

Source: US CDC weekly report

ECDC assessment:

In the US, it is very popular to attend agricultural fairs where animals such as pigs are present and can be touched by the visitors. The fair season in the US can last into the autumn and influenza virus transmission events from pigs to humans during these fairs have been reported earlier. Based on the current situation, the risk to the general population visiting the US is considered very low. Travelers to the US attending agricultural fairs should be aware of the risk that pigs could be infected with swine influenza viruses. Travelers with direct exposure to pigs that show respiratory symptoms should refrain from travelling and seek medical attention.

Actions:

ECDC monitors zoonotic influenza events through its epidemic intelligence activities and disease experts in order to identify significant changes in the epidemiology of the virus. Cases should be reported immediately to EWRS and IHR.

11. False negative results with PCR assays used for diagnosing monkeypox

Overview:

On 2 September, the US Centers for Disease Control and Prevention issued a **CDC laboratory alert** about false negative test results with two PCR assays used for diagnosing monkeypox.

Available data suggest that the false-negative results are due to a significant deletion in the TNF receptor gene. This gene is the target for the generic MPXV and the Clade II (West African clade)-specific PCR assays published by Li et al. in 2010.

Actions:

ECDC relayed this information to EVD and STI networks as well as the EVD-LabNet network. Further information on the use of these assays in the EU/EEA is being collected.

12. Spread of hepatitis A virus strains of genotype IB in several EU countries and the United Kingdom

Overview:

Clusters and outbreaks of hepatitis A virus (HAV) genotype IB with four unique but closely-related HAV sequences have been reported in six European Union (EU) countries and in the United Kingdom (UK).

As of 29 September 2022, 303 cases with identical or closely related HAV strains have been identified in Austria (7), Germany (8), Hungary (161), the Netherlands (8), Slovenia (35), Sweden (8), and the UK (76). Currently available epidemiological and microbiological data suggest that human-to-human transmission has occurred, and possibly also transmission through contaminated food.

On 15 February 2022, Hungary reported an outbreak of HAV genotype IB with the disease onset of the first case in early December 2021. To date, 161 cases (139 males, 22 females) have been confirmed with this strain in the National Hepatitis Reference Laboratory in Hungary. The weekly number of reported hepatitis A cases have been

declining since June 2022. Several infected people identified themselves as men who have sex with men (MSM), suggesting possible transmission among sexual contacts. Several patients have been hospitalised.

In July 2022, a foodborne outbreak was suspected with a link to a restaurant in Hungary, where 16 people fell ill with HAV IB infection. Some of the patients reported consuming cold soup made with frozen berries. In the UK, no clear source of infection has been identified, but epidemiological investigations so far indicate possible foodborne infections in addition to person-to-person transmission. Germany, the Netherlands, and Sweden have reported a total of nine cases infected with strains matching the sequences of the UK strain. Investigations of these cases didn't find any clear risk factors for infection such as a travel history or consumption of berries. Further investigations are ongoing.

HAV is highly transmissible through contaminated water, food, and via the faecal–oral route among close contacts (e.g. household contacts, sexual contacts, and contacts in day-care centres or schools), with an average incubation period of four weeks, ranging from two to six weeks. The virus is highly resistant to environmental conditions as well as to several preservation methods like acidification or freezing. Therefore, possible food-borne transmission should be investigated when several cases are reported within a short period.

Practising good hand hygiene – including thoroughly washing hands with soap after using the bathroom, changing nappies, and before preparing or eating food – plays an important role in preventing the spread of hepatitis A. Scaling up surveillance to detect and investigate sporadic and clusters of cases possibly associated with foodborne transmission in collaboration with food safety authorities is essential.

MSM are at risk of HAV infection when engaging in sexual practices that facilitate faecal-oral transmission of the virus. Hepatitis A vaccination, which is safe and highly effective, is the main option for response in the context of the current circulation of HAV genotype IB among MSM. The World Health Organisation and most EU/EEA countries recommend hepatitis A vaccination for MSM.

Besides vaccination, other options can contribute to the prevention of transmission among MSM: the use of condoms for anal sex, which have the additional benefit of offering protection against other sexually transmitted infections and good personal hygiene (e.g. washing hands and genital areas before and after sex). For the provision of primary prevention advice, authorities should consider engaging with civil society, social media, media outlets and dating apps to raise awareness among MSM about the risk of contracting HAV and the importance of vaccination. MSM who have already contracted the infection should be referred to sexual health services for further testing.

ECDC assessment:

As of 29 September 2022, 303 cases with identical or closely related HAV strains have been identified in Austria (7), Germany (8), Hungary (161), the Netherlands (8), Slovenia (35), Sweden (8), and the UK (76). Currently available epidemiological and microbiological data suggest that human-to-human transmission, including transmission among MSM, has occurred, and possibly also transmission through contaminated food.
The most recent cases are reported in September 2022, suggesting the chain of transmission may still be ongoing and new cases are likely to be reported.

Actions:

ECDC in collaboration with country experts is monitoring this event through Epipulse and epidemic intelligence activities. A teleconference with country experts from the EU/EEA and the UK was held on 14 September 2022. A news item has been published on the ECDC website on 29 September 2022. The representative sequences for the outbreak have been defined, and an outbreak case definition and a tool for case-based data collection are under development. The main options for response from the Rapid risk assessment: Hepatitis A outbreak in the EU/EEA mostly affecting men who have sex with men remain valid.

13. Ebola - North Kivu, Democratic Republic of the Congo (15th outbreak) - 2022

Overview:

Update: According to a press release from OCHA, on 27 September 2022, the national health authorities in the DRC declared the latest outbreak of Ebola virus disease (EVD) over. The outbreak ended 42 days after the burial of the single EVD case reported on 22 August 2022. Fifty-one direct contacts of the Ebola victim and 303 contacts of contacts were vaccinated.

Summary: On 22 August 2022, one case of Ebola virus disease (EVD) due to the *Zaire* virus strain was confirmed by the Institut National de Recherche Biomédicale (INRB). Following the burial of this fatal case which occurred without specific precautions, contact tracing and vaccination was effective in preventing further cases, and the outbreak is now considered over.

According to INRB, the genome sequence revealed that the virus was closely related to the virus that caused the cluster of cases that occurred in Beni around November-December 2018. The sample had six additional mutations, indicating that continued human-to-human transmission was unlikely. This case likely represents a new flare-up of the 2018-20 North Kivu/Ituri EVD outbreak (Ebola Zaire strain), initiated by transmission of the virus from a persistently infected survivor or a survivor who experienced a relapse. Epidemiological investigations are ongoing to determine the source.