WEEKLY BULLETIN

Communicable Disease Threats Report

Week 40, 2 - 8 October 2022

Disease topics

1. Middle East respiratory syndrome coronavirus (MERS-CoV) - Multi-country

Overview:

Update: Since the previous update published on 9 September 2022, and as of 3 October 2022, no new MERS-CoV cases have been reported by health authorities or the World Health Organization (WHO).

Summary: Since the beginning of 2022, and as of 3 October 2022, three MERS-CoV cases have been reported in Qatar (2) and Oman (1), including one death. All three cases were primary cases, having reported contact with camels. The last cases reported in Qatar prior to these cases were in February 2020 and in February 2019.

Since April 2012, and as of 3 October 2022, 2 603 cases of MERS-CoV, including 944 deaths, have been reported by health authorities worldwide.

Sources: ECDC MERS-CoV page | WHO MERS-CoV | ECDC factsheet for professionals | Qatar MoPH Case #1 | Qatar MoPH Case #2 | FAO MERS-CoV situation update | WHO DON Oman

ECDC assessment:

Human cases of MERS-CoV continue to be reported in the Arabian Peninsula. However, the number of new cases detected and reported through surveillance have dropped to the lowest levels since 2014. The risk of sustained human-to-human transmission in Europe remains very low. The current MERS-CoV situation poses a low risk to the EU, as stated in ECDC's rapid risk assessment published on 29 August 2018, which also provides details on the last case reported in Europe.

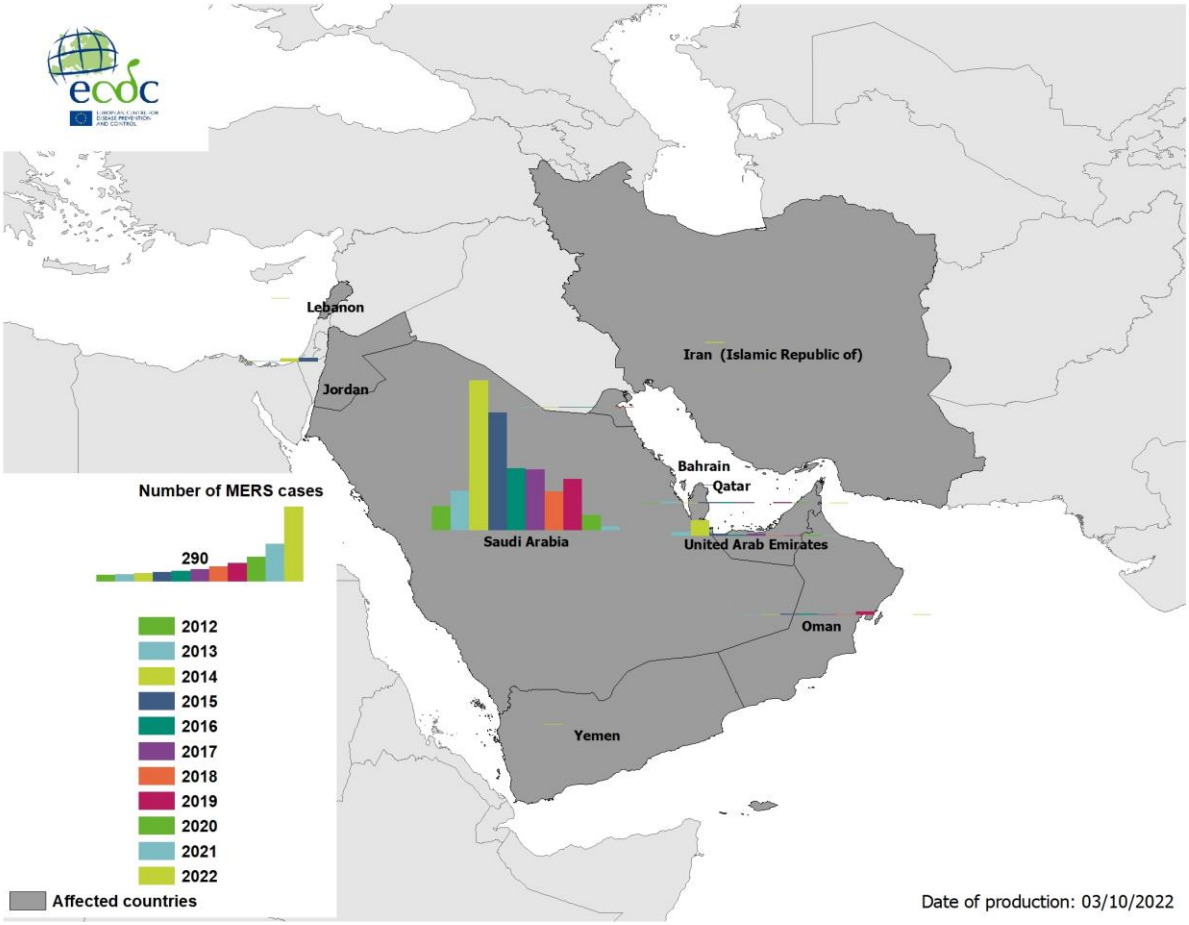
ECDC published a technical report, Health emergency preparedness for imported cases of high-consequence infectious diseases, in October 2019, which will be useful for EU Member States wanting to assess their level of preparedness for a disease such as MERS. ECDC also published Risk assessment guidelines for infectious diseases transmitted on aircraft (RAGIDA) – Middle East Respiratory Syndrome Coronavirus (MERS-CoV) on 22 January 2020.

Actions:

ECDC is monitoring this threat through its epidemic intelligence activities, and reports on a monthly basis.

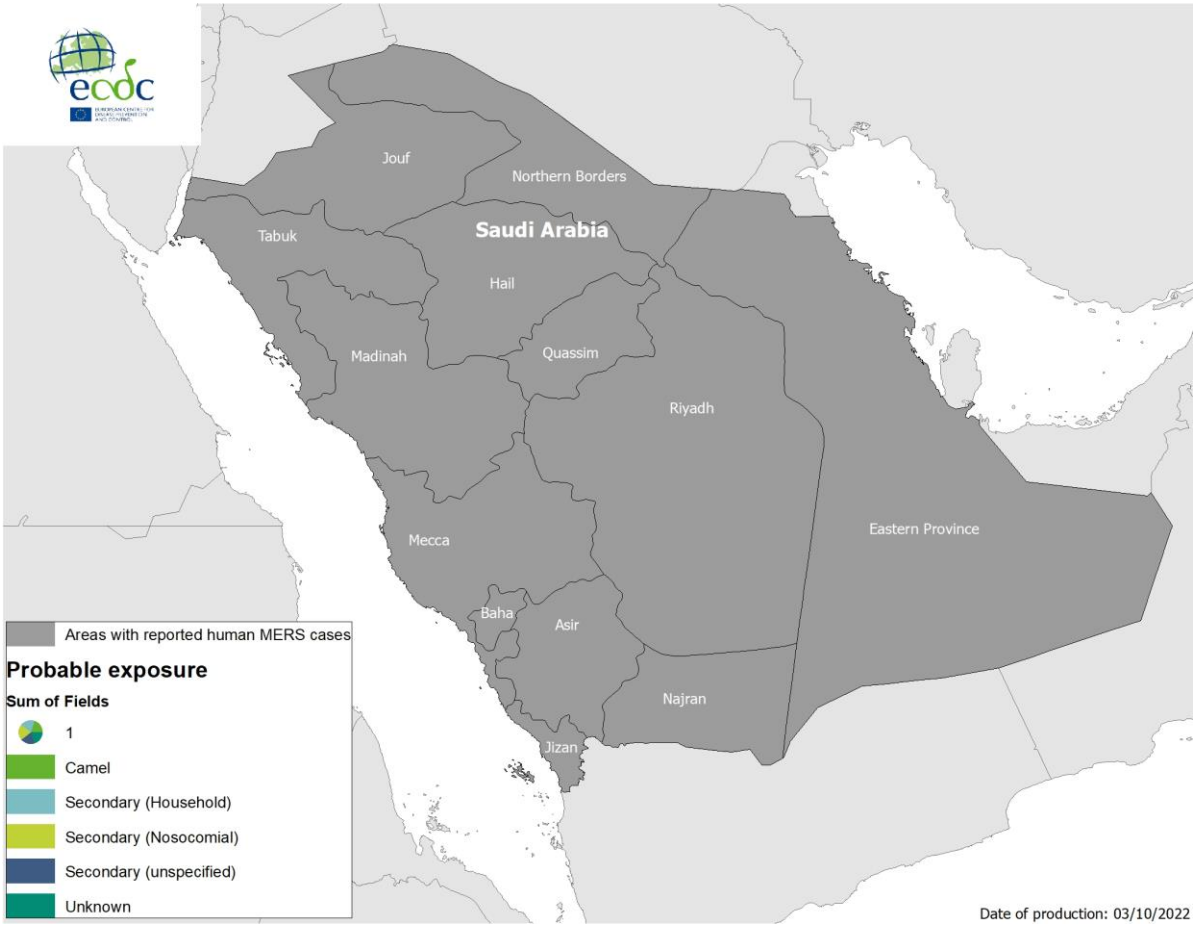
Maps and graphs

Figure 1. Geographical distribution of confirmed MERS-CoV cases by country of infection and year, from April 2012 to 3 October 2022



Source: ECDC

Figure 2. Geographical distribution of confirmed MERS-CoV cases by probable region of infection and exposure, from 1 January to 3 October 2022



Source: ECDC

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

Overview:

Summary

At the end of week 39-2022 (week ending 2 October), the pooled EU/EEA notification rate of COVID-19 cases among people aged 65+ years increased by 14% compared with the previous week. Increases were observed in 19 of the 26 countries reporting data on this indicator. The pooled rate has been increasing for two weeks. Increases in overall (all-age) pooled EU/EEA notification rates have been reported for three consecutive weeks, with 17 countries reporting an increasing trend this week.

Pooled EU/EEA rates of hospital or ICU indicators have increased for 1-2 weeks. Of the 26 countries reporting data on these indicators, 15 observed an increasing trend in at least one indicator compared with the previous week.

The pooled EU/EEA COVID-19 death rate decreased by 10% and constituted 4.5% of the pandemic maximum for this indicator which has been decreasing for seven weeks.
Among the 12 countries with an adequate volume of sequencing or genotyping for weeks 37–38 (12 September to 25 September 2022), the estimated distribution of variants of concern (VOC) or of interest (VOI) was 98.7% (97.7–100.0% from 12 countries) for BA.4/BA.5, 0.9% (0.3–1.5%, 159 detections from 7 countries) for BA.2.75 and 0.7% (0.1–1.4%, 601 detections from 11 countries) for BA.2

As of week 37, 2022, ECDC discontinued 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 3 October 2022, the United States Food and Drug Administration (FDA) published a press release stating the addition of important information to the authorised factseet for Evusheld (tixagevimab co-packaged with cilgavimab) stating the decreased neutralisation power of the product against certain variants of SARS-CoV-2. According to the FDA Fact Sheet for Healthcare Providers, there is a potential risk of treatment failure, due to new variants of SARS-CoV-2 that are resistant to tixagevimab and cilgavimab. FDA suggested that healthcare providers consider the prevalence of SARS-CoV-2 variants in their area, where data are available, when choosing the type of prophylactic treatment. However, FDA continues to recommend Evusheld as an effective pre-exposure prophylaxis (PrEP) to prevent COVID-19, in combination with other preventative measures like getting vaccinated and boosted as recommended, because Evusheld still offers protection against many of the currently circulating variants and may offer protection against future variants.

On 30 September 2022, the Public Health Agency of Sweden published a press release stating that, the general recommendation for vaccination against COVID-19 for children in the 12–17 age group will end on 31 October 2022. After this date, COVID-19 vaccinations will only be recommended for children in this age group who have increased risk of developing serious illness from COVID-19. The Agency reviewed this recommendation because the risk of serious illness and death from COVID-19 is very low for children and young people.

On 30 September 2022, the Luxembourg government announced that from 1 October 2022 the country is removing all COVID-19-related travel restrictions for third-country nationals residing outside the European Union. This means third-country nationals can travel to the country for all types of travel, including non-essential travel regardless of their COVID-19 vaccination status.

Weekly update on SARS-CoV-2 variants
Since the last update on 22 September 2022 and as of 6 October 2022, the following changes have been made to ECDC variant classifications for variants of concern (VOC), variants of interest (VOI), variants under monitoring and De-escalated variants :

ECDC designated B.1.1.529 with K444X and N460X as a variant under monitoring that includes variants of any Omicron lineage that carry the combination of changes K444X and N460X. A wide range of new SARS-CoV-2 variants within Omicron that carry changes at positions 444 and 460 in the spike have recently emerged. These variants belong to several different lineages (mainly BQ.1, BU.1, and BW.1 and their sub-lineages). These substitutions are located near important antigenic sites, and there are some indications of a significant effect on neutralising activity.

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.

3. Increase in hepatitis cases in children – Multi-country – 2022

Overview:

Update: Since the last surveillance bulletin on 26 August 2022, 44 new cases have been reported to ECDC via The European Surveillance System (TESSy).

As of 29 September 2022, 555 cases of acute hepatitis of unknown aetiology have been reported by 22 countries: Austria (6), Belgium (14), Bulgaria (1), Cyprus (2), Denmark (8), Finland (1), France (10), Greece (20), Ireland (29), Israel (5), Italy (45), Latvia (1), Luxembourg (1), the Netherlands (16), Norway (6), Poland (21), Portugal (26), Republic of Moldova (1), Serbia (1), Spain (52), Sweden (11), and the United Kingdom (278).
There have been six deaths associated with the disease in the European Region.

Whilst reporting delay may influence case numbers in recent weeks, there has been a steady decrease in the number of cases reported weekly since week 18.

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

Summary: On 5 April 2022, the UK reported an increase in acute hepatitis cases of unknown aetiology for whom laboratory testing had excluded hepatitis types A, B, C, D and E among previously healthy children aged under 10 years from Scotland. On 12 April, the United Kingdom reported that in addition to the cases in Scotland, there were approximately 61 further similar cases under investigation in England, Wales and Northern Ireland. The cases presented with symptoms and signs of severe acute hepatitis, including increased levels of liver enzymes (aspartate aminotransaminase/ aspartate transaminase [AST] or alanine aminotransaminase/ alanine transaminase [ALT] greater than 500 IU/L) and jaundice. Some of the cases also presented with gastrointestinal symptoms such as vomiting, pale stools, diarrhoea, nausea and abdominal pain. A small number of cases presented with fever. According to the preliminary results of two case control studies conducted by the University of Glasgow Centre for Virus Research and University College London and Great Ormond Street Hospital, cases with hepatitis of unknown origin seemed more likely to have an Adeno-associated virus 2 (AAV2) infection compared to controls, indicating its potential implication in the pathology of the disease. The prevalence of adenovirus and human herpesvirus 6B was higher among the cases but numbers were low and/or association was not always statistically significant.
In both studies, analysis of HLA allele positivity showed that class II HLA, particularly HLA DRB 1*04:01, was more prevalent present among cases than controls and general population.

Overall, neither study provide definitive evidence that adenovirus or AAV2 were directly responsible for the liver damage seen in those cases. There was not enough evidence to rule out the implication of SARS-CoV-2 infection in the disease, but it remains an unlikely cause. The main conclusions drawn by both research teams are that pandemic restrictions disrupted normal childhood mixing patterns so children were not exposed to AAV2 or AdV infections and that the AdV outbreaks that followed lifting of restrictions, together with AAV2 infection, triggered an immune mediated hepatitis in genetically susceptible children. However, both studies had limitations and both research teams concluded that further research was needed through larger studies to provide more conclusive evidence.

According to the latest update from WHO, as of 12 July 2022, probable cases and cases pending classification have been reported from the Region of the Americas (435, including 334 in the US), Western Pacific Region (67), the South-East Asia Region (19) and the Eastern Mediterranean Region (2).

According to WHO, at least 46 children worldwide have required liver transplants and 22 deaths have occurred.

ECDC assessment:

AAV2 and adenovirus have been detected in a high number of cases and as a result the current leading hypotheses concern AAV2 and adenovirus involvement, possibly with an immunological cofactor that is triggering a more severe infection or immune-mediated liver damage. The increase in cases that was observed in April and early May, and particularly in the youngest age group, may be affected by the lack of exposure to several pathogens and increased susceptibility to infection due to measures taken to curb the COVID-19 pandemic. Evidence of human-to-human transmission remains unclear. Cases in the EU/EEA are sporadic with a definite decreasing trend. While the risk for further spread cannot be accurately assessed, cases appear to be declining. A case control study is planned and should provide greater information on the aetiological factors underlying the cases.

Actions:

ECDC established reporting of case-based data for cases of acute hepatitis of unknown aetiology in TESSy. Results are published monthly in the Joint ECDC-WHO Regional Office for Europe Surveillance Bulletin. The surveillance reporting protocol is available here.

ECDC has developed a protocol to conduct an exceedance analysis using ICD codes to understand whether or not we have observed an increase of cases of hepatitis of unknow aetiology compared to previous years in EU/EEA countries. Analysis is ongoing with some challenges related to data obtainment and comparability. ECDC is working with countries and clinical networks to conduct a case control study to determine the underlying aetiology.

ECDC will continue to work in collaboration with the affected countries, WHO, and other partner organisations. ECDC will continue to monitor the situation through routine epidemic intelligence activities and report significant events monthly.

Further information:

Cases of hepatitis of unknown origin should be reported to TESSy if they meet any of the following criteria:

- **Confirmed**: N/A
- **Probable**: A person presenting with an acute hepatitis (non-hepatitis viruses A, B, C, D and E*) with aspartate transaminase (AST) or alanine transaminase (ALT) over 500 IU/L, who is 16 years old or younger, since 1 October 2021.
- **Epi-linked**: A person presenting with an acute hepatitis (non-hepatitis viruses A, B, C, D and E*) of any age who is a close contact of a probable case since 1 October 2021.

Cases of hepatitis with known aetiology such those due to specific infectious diseases, drug toxicity, and metabolic hereditary, or autoimmune disorders should not be reported under this protocol.
The **signals from media sources** detected via epidemic intelligence activities can be viewed in the file attached to the workspace.

4. Monkeypox - Multi-country - 2022

Overview:

Update:
Since the last update on 27 September 2022, and as of 4 October 2022, 88 monkeypox cases have been reported from 14 EU/EEA countries: Spain (28), Germany (19), Ireland (10), Sweden (6), Austria (5), Greece (4), Poland (4), Belgium (3), Czechia (3), Italy (2), Denmark (1), Hungary (1), Iceland (1) and Norway (1).
Since week 30-2022, the number of reported cases has constantly declined, likely due to a combination of factors described in the assessment below.

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 4 October 2022, 20 248 confirmed cases of monkeypox (MPX) have been reported from 29 EU/EEA countries: Spain (7 209), France (3 998), Germany (3 631), Netherlands (1 215), Portugal (855), Italy (851), Belgium (775), Austria (314), Sweden (198), Ireland (195), Poland (195), Denmark (187), Norway (92), Greece (82), Hungary (78), Czechia (68), Luxembourg (55), Slovenia (47), Finland (40), Romania (40), Malta (33), Croatia (29), Iceland (15), 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).

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Western Balkans and Turkey:
Since the start of the monkeypox outbreak and as of 4 October 2022, the following Western Balkan countries have reported confirmed cases of monkeypox: Serbia (40), Bosnia and Herzegovina (6) and Montenegro (2). In addition, 12 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 Joint ECDC-WHO Regional Office for Europe Surveillance Bulletin published weekly.
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 to be 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.
MPX case numbers have been decreasing since the end of July. Efforts in risk communication and community engagement, resulting in behavioural changes, together with the end of the summer events season, vaccination, and increased immunity levels have been reported as key contributors to this effect.

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

Overview:

Since last week's update, and as of 5 October 2022, European Union (EU) and European Economic Area (EEA) countries reported 54 human cases of West Nile virus (WNV) infection and 8 deaths related to WNV infections. Cases were reported by Greece (33), Italy (15), Romania (4) and France (2). Deaths were reported by Greece (6) and Italy (2). EU-neighbouring countries reported 15 human cases of WNV infection, all by Serbia and no deaths related to WNV infections.

This week, among the reporting countries, the following NUTS 3 or GAUL1 regions have reported human cases of WNV infection for the first time ever: Bouches-du-Rhône in France.

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: Bouches-du-Rhône and Var in France and Rasinski in Serbia.

Since the beginning of the 2022 transmission season and as of 5 October 2022, EU/EEA countries have reported 904 human cases of WNV infection in Italy (550), Greece (264), Romania (47), Hungary (14), Germany (8), Croatia (8), Austria (6), Spain (4), France (2) and Slovakia (1). EU/EEA countries have reported 62 deaths in Italy (31), Greece (26) and Romania (5). EU-neighbouring countries have reported 202 human cases of WNV infection and 8 deaths in Serbia.

During the current transmission season, within the reporting countries, human cases of WNV infection were reported from 100 different NUTS 3 or GAUL 1 regions, of which the following regions reported human cases of WNV infection for the first time ever: Bouches-du-Rhône in France, 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, 70 outbreaks among equids and 250 outbreaks among birds have been reported by EU/EEA countries. Outbreaks among equids have been reported by Italy (37), Germany (11), Croatia (8), Greece (5), Spain (4), France (2), Hungary (2) and Austria (1). Outbreaks among birds have been reported by Italy (200), Germany (42), Spain (4), Croatia (2), Austria (1) and Hungary (1).
Please note that due to technical reasons no static maps will be published this week. Kindly refer to the WNV dashboard instead.

ECDC links: West Nile virus infection webpage
Sources: TESSy | Animal Disease Information System

ECDC assessment:

During the current transmission season, human cases of WNV infection have been reported from countries that had reported WNV infections in previous years.

Two EU 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 at this stage than in the 2018 season, but higher than in other years in the past decade.

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 dashboard and an epidemiological summary every Friday.

Further information:

Data on human cases are collected via The European Surveillance System (TESSy) 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

6. Locally-acquired dengue cases - France - 2022

Overview:

In 2022 and as of 4 October 2022, France has reported nine outbreaks with a total of 63 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. One case from Andrest visited Rabastens during the viraemic period, hence this event is considered as one cluster.
- four cases in Salvetat Saint Gilles *(situated close to Toulouse)* among a household with onset of symptoms in the second half of August 2022.
- one case in Montauban (50 km north of Toulouse), Tarn et Garrone.
- two cases in Toulouse, Haute Garonne among a household with onset of symptoms in the second half of September 2022.

In Provence-Alpes-Cote d'Azur region:

- seven cases in Fayence, Var with onset of symptoms between end of June and end of July 2022.
- 33 cases in St Jeannet, Gattières, and Gaude (*situated close to Nice*), Alpes-Maritimes with onset of symptoms in August-September 2022.
- 10 cases in Saint Laurent du Var (situated close to Nice) with onset of symptoms in August-September 2022.

Corsica

- one case with onset of symptoms mid-September.

The outbreaks in Perpignan, Salvetat Saint Gilles and Fayence are now considered over, following the implementation of control measures. For the other outbreaks, additional cases might be detected.

Upon confirmation of these cases, epidemiological investigations and vector control measures were implemented. Sante Publique France provides regular updates on their website.

ECDC assessment:

In Europe, dengue virus is transmitted via the mosquito vector *Aedes albopictus*, which is established in a large part of Europe.

The occurrence of nine clusters in France, including a cluster of over 30 cases, is unusual. 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 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. However, to date, no other EU country reported cases associated to any of these clusters. 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.

To date, all autochthonous outbreaks of dengue in mainland EU/EEA have occurred between June and November. More information is available on ECDC's dedicated webpage on autochthonous transmission of dengue virus in the EU/EEA, and in ECDC's dengue factsheet

Actions:

ECDC is monitoring this event through epidemic intelligence activities and in close contact with the French public health institute. Updates are regularly provided through EpiPulse. National public health authorities in EU/EEA countries have been asked to report any dengue case related to travel to France through EpiPulse.

Further information:

Personal protective measures against mosquito bites are recommended in affected areas to reduce mosquito-borne transmission of dengue virus. Indoor and outdoor personal protective measures to reduce mosquito bites include the use of mosquito repellent in accordance with the instructions indicated on the product label; wearing long-sleeved shirts and long trousers, especially during the daytime when *Ae. albopictus* mosquitoes are most active; and sleeping and resting in screened or air-conditioned rooms and using mosquito bed nets both at night and during the day.

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

Overview:

Summary: According to WHO AFRO, as of 5 October 2022, there have been 44 confirmed and 20 probable cases of Ebola virus disease (EVD), including 10 deaths. Among these, there were 10 healthcare workers infected including four deaths.

As of 2 October 2022, health officials have identified at least 882 contacts of cases.

Cases are reported mainly from Mubende. However, districts Bunyangabu, Kyegegwa, Kasanda and Kagadi are also affected. As of 6 October, no cases have been reported in the capital city of Kampala.

On 5 October 2022, the Nigerian Centre for Disease Control and Prevention (NCDC) issued a statement warning of high risk of importation of EVD to Nigeria due to increased travel between the countries. No cases of EVD have been detected in Nigeria to date.

Background: 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. 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.

The Ugandan government 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 in Uganda. There is also the risk of spread to neighbouring countries. As there is no approved vaccine against EVD Sudan ebolavirus, control of the outbreak should focus on the early detection and isolation of cases, and contact tracing. 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 relevant updates on a weekly basis.

Additional Sources:

Source: **Ministry of Health Uganda** , **OCHA**, **Africa CDC**, **Ministry of Health Kenya**, NCDC, WHO, media (**1**, **2**, **3**, **4**)

8. Human case with avian influenza A(H5N1) infection - Spain - 2022

Overview:

On 17 September 2022, an outbreak of avian influenza A(H5N1) among laying hens was reported in Guadalajara, in Castilla-La Mancha region, Spain. Samples from 12 farm workers were taken as a precautionary measure. One respiratory sample from an asymptomatic person was confirmed as avian influenza A(H5N1) by the National Center for Microbiology on 27 September 2022.

On 4 October 2022, the Ministry of Health of Spain published a report and risk assessment following this confirmed detection of avian influenza A(H5N1). The person is a 19-year-old man who worked in the poultry farm. Microbiological investigation using reverse transcription polymerase chain reaction (RT-PCR) indicated a high Ct value, which corresponds to a low viral load. All tested persons were asymptomatic, and all except one tested negative. The case stayed in home isolation until a second RT-PCR test confirmed negative on 28 September 2022. One close contact of the case tested negative and had no symptoms.

This is the first detection of avian influenza A(H5N1) in a human sample in Spain and in the EU/EEA. No human-to-human transmission has been detected to date. An increase of outbreaks of A(H5N1) among farm and wild birds has been observed this season in Spain as well as in other European countries. In March 2022, Spanish authorities published an updated protocol for prevention, early detection and control of avian influenza leading to an

intensified public health actions, including screening of people working in poultry farms in affected areas. To date, samples were collected from 253 exposed people from 22 farms in four regions (Andalusia, Castilla y León, Castilla-La Mancha and Extremadura), of these, 177 RT-PCR tests were performed and all, but one were negative.

To date and since 2003, 866 cases, including 456 deaths were reported globally in 21 countries, including one EU/EEA country (Spain). The most recent human cases with detection of circulating avian influenza A(H5N1) were reported in the USA (April 2022) and UK (December 2021), both previous cases either were asymptomatic or had very mild symptoms and both had exposure to infected birds confirmed with avian influenza A(H5N1).

ECDC assessment:

The risk has been assessed to be low for the general population based on the low likelihood of exposure to infected birds and the mild clinical picture observed in this event. For occupationally exposed people the risk is enhanced due to their contact to infected animals and assessed to be low to medium. With ongoing outbreaks in wild birds and poultry farms as well as other settings, exposed people are encouraged to wear appropriate personal protective equipment and health authorities should continue to follow up exposed people and test people with respiratory symptoms or other atypical severe symptoms following exposure to likely infected animals.

Actions:

ECDC is closely following this event through epidemic intelligence activities and through influenza network and has been in contact with Spanish health authorities.

Further information:

ECDC just published the latest **avian influenza situation overview** as well as a guidance document on **Testing and detection of zoonotic influenza virus infections in humans in the EU/EEA, and occupational safety and health measures for those exposed at work**

9. *Aedes aegypti* detected in Cyprus

Overview:

According to a **media** article, the Cyprus health ministry has warned that *Aedes aegypti* mosquitos – often referred to as the yellow fever mosquito – have been identified in Cyprus, mainly in the area of Dromolaxia, near Larnaca.

ECDC assessment:

The detection of a possibly established population of *Aedes aegypti* is concerning. This mosquito species is an efficient vector for dengue virus, yellow fever virus, and other viruses. However, the emergence of these diseases requires that these viruses are first imported into Cyprus. It is therefore important to implement vector control measures for prevention purposes. ECDC is informed that such measures are being undertaken in Cyprus.

The risk posed by *Aedes aegypti* to the EU/EEA is illustrated by the dengue epidemic of 2012/2013 on Madeira. With ongoing mosquito control, autochthonous dengue has not reoccurred on the island. It is noteworthy that *Aedes aegypti* was detected also on Fuerteventura (Canary Islands, Spain) in 2017, but that the authorities managed to eliminate this mosquito population shortly thereafter.

Recently, the VectorNet project, commissioned by ECDC, published a scientific article on the 'paradox' of *Aedes aegypti* not being more widespread in Europe, despite a favourable environment.

Actions:

ECDC is in contact with public health authorities in Cyprus and provide support as needed.

10. Invasive meningococcal disease - Ireland - 2022

Overview:

According to Irish health authorities, three confirmed cases and one possible case of invasive meningococcal disease (IMD), including two deaths, have been reported in Ireland in the last week of September 2022. Three of the cases are reported to be caused by serogroup B (SgB).

Cases have been reported among young adults and in one child less than 10 years of age. These cases are reported from different regions in the country without any known epidemiological link.

According to the same source, close contacts are being identified and will be provided with antibiotic chemoprophylaxis and vaccination against SgB IMD when indicated.

ECDC assessment:

Although the detection of sporadic cases of invasive meningococcal disease (IMD) is expected, the occurrence of three confirmed cases and one possible case without epidemiological link in just one week time, deserves further investigations.

Invasive meningococcal disease is a severe condition against which there are very effective vaccines. Ongoing surveillance including molecular surveillance as well as susceptibility testing is essential to inform implementation of prevention and control measures. Once a case is detected, contact tracing and administration of chemoprophylaxis to close contacts is important to reduce the risk of secondary cases. In addition, efforts should be made to ensure that all eligible individuals receive vaccination. Several vaccines targeting different serogroups are available for the prevention of IMD. The information on case vaccination status should be collected, including specific information about which serogroup/s the different meningococcal vaccines was indicated for.

Preventative action such as vaccination is the most effective way to prevent IMD and its consequences. Additional actions include early detection, isolation and management of suspected meningitis cases, identification of close contacts of cases and provision of chemoprophylaxis and monitoring of close contacts for clinical symptoms for at least ten days from latest possible exposure.

ECDC has published a factsheet on meningococcal disease where recommended case management and treatment is described.

An ECDC Expert Opinion on the introduction of the meningococcal B (4CMenB) vaccine in the EU/EEA, is also available online.

Actions:

ECDC is monitoring this event through epidemic intelligence activities