

WEEKLY BULLETIN

Communicable Disease Threats Report Week 5, 30 January - 5 February 2023

Today's disease topics

1. Weekly Summary
2. COVID-19 associated with SARS-CoV-2 - Multi-country (EU/EEA) - 2019 - 2023
3. C. diphtheriae among migrants – Europe – 2022 - 2023
4. Mpox - Multi-country - 2022-2023
5. Influenza – Multi-country – Monitoring 2022/2023 season
6. Middle East respiratory syndrome coronavirus (MERS-CoV) - Multi-country
7. Influenza A(H9N2) - Multi-country (World) - Monitoring human cases
8. Human case with avian influenza A(H5) infection - Ecuador - 2022-2023
9. Influenza A(H5N6) - Multi country - Monitoring human cases
10. One case of Bovine spongiform encephalopathy (BSE) – The Netherlands – 2023
11. Nipah virus - Bangladesh - 2023

1. Weekly Summary

Overview:

COVID-19 associated with SARS-CoV-2 - Multi-country (EU/EEA) - 2019 - 2023

- In the week ending 29 January 2023, the COVID-19 epidemiological situation in the EU/EEA continued to improve based on the data reported. Case numbers in the general population and in long-term care facilities, pooled rates of case notification (all-age and among those aged 65 years and above), hospital and ICU admission, and COVID-19 deaths have all declined to the lowest levels observed in the past 12 months.
- As of 30 January 2023, 21 864 sequences belonging to XBB.1.5 lineage have been deposited in GISAID EpiCoV. Most of these submissions are from the United States (16 865 sequences), and the United Kingdom (1 404 sequences). Increasing proportions of XBB.1.5 have been observed in all EU/EEA countries, circulating at 1.4% to 15% with an average of 5% proportions.
- According to China CDC, on 30 January 2023, 144 000 hospitalised cases and 434 deaths were reported in mainland China.

C. diphtheriae among migrants – Europe – 2022 - 2023

- As of 2 February 2023, and since the last update on 24 January 2023, 31 new cases of diphtheria among migrants have been reported from Germany.

- For the upcoming updates, data routinely submitted by countries to The European Surveillance System (TESSy) will be used to monitor cases of diphtheria in Europe among the migrant and the general population. The report will be published in the CDTR on a monthly basis.
- As of 2 February 2023, the total number of diphtheria cases reported among migrants in the EU/EEA is 273, while the total number of diphtheria cases reported among migrants in Europe is 371.
- ECDC has no data indicating further transmission and outbreaks of *C. diphtheriae* in the broader EU/EEA population resulting from the increased number of diphtheria cases observed.
- An unusually broad predicted resistance of *Corynebacterium* (*C.*) diphtheriae isolates to common oral and parenteral antibiotics has been reported. ECDC recommends, as a precautionary measure, that antimicrobial susceptibility testing is performed on all *C. diphtheriae* isolates.

Mpox - Multi-country - 2022-2023

- Since the last update on 17 January 2023, and as of 31 January 2023, 23 mpox cases have been reported from eight EU/EEA countries
- Overall, 21 163 confirmed cases of mpox have been reported from 29 EU/EEA countries.
- The weekly number of mpox cases reported in the EU/EEA peaked in July 2022, and since then, a steady declining trend has been observed, reaching a plateau with very low numbers since week 52 2022.

Influenza – Multi-country – Monitoring 2022/2023 season

- The seasonal epidemic activity threshold of 10% positivity in sentinel specimens was first crossed in week 45/2022.
- Influenza activity appears to have decreased across the Region since week 51/2022 following an early start to the influenza season, although transmission remains at moderate or high levels in many countries.
- Countries are experiencing a mixed distribution of circulating viruses with increasing circulation of A(H1)pdm09 and type B viruses.
- Overall this season, influenza A(H3) viruses have dominated in primary care sentinel specimens but with similar proportions of A(H1)pdm09 and A(H3) viruses in non-sentinel specimens.
- Type A viruses (mostly not subtyped) have been detected in hospitalized patients in ICU and other wards, and influenza A(H1)pdm09 viruses have dominated in SARI specimens.

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

- Since the previous update on 9 January 2023, one new MERS-CoV case has been reported by Oman health authorities with date of onset in December 2022.
- Since the beginning of 2023, and as of 30 January 2023, no MERS-CoV cases have been reported with date of onset in 2023 by health authorities worldwide or by the World Health Organization.

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

- Three new cases of avian influenza A(H9N2) were reported from China bringing the overall number of human cases to 118, including two deaths since 1998.
- Most of the cases have been reported from China (105).
- No cases have been reported in the EU/EEA.

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

- One new case of human infection with avian influenza A(H5N6) was reported from China with date of onset in November 2022. The patient is a 54-year-old man from Hunan province; hospitalised in critical condition.
- Overall, there has been 83 cases, including 33 deaths (CFR:40%) reported in China (82) and Laos (1).
- The risk of zoonotic influenza transmission to the general public in EU/EEA countries is considered to be very low.

Human case with avian influenza A(H5) infection - Ecuador - 2022-2023

- One case of influenza A(H5) was reported in a nine-year-old girl from Bolivar province in Ecuador. The girl is in critical condition and had exposure to poultry.
- This is the first case of avian influenza infection reported in humans in Ecuador, including in Latin America and the Caribbean region.
- The risk associated with A(H5) viruses which also circulate in birds in the EU/EEA is considered to be low for the general population and low to medium for occupationally exposed people.

One case of Bovine spongiform encephalopathy (BSE) – The Netherlands – 2023

- One case of atypical BSE has been identified in an eight-year-old cow in the Netherlands.
- The Dutch authorities have taken the required control measures and the case does not pose a risk to human health in the EU/EEA.

Nipah virus - Bangladesh - 2023

- Eight cases, including five deaths of Nipah virus reported in Bangladesh in 2023.
- The likelihood of exposure and infection by NiV for EU/EEA citizens travelling or residing in Bangladesh is currently very low.

2. COVID-19 associated with SARS-CoV-2 - Multi-country (EU/EEA) - 2019 - 2023

Overview:

Summary:

In the week ending 29 January 2023, there was a continued overall improvement of the COVID-19 epidemiological situation in the EU/EEA based on the data reported. Following the substantial increases in transmission and severe outcomes observed during December in both the general population and in long-term care facilities, pooled rates of case notification (all-age and among those aged 65 years and above), hospital, ICU admission and COVID-19 deaths have declined to the lowest levels observed in the past 12 months.

Most countries reported a similar picture, although increases were reported by two of 28 countries reporting case notification data up to week 4, and four of 23 countries with data on hospital or ICU admissions/occupancy. However, these increases were recent (of one week's duration) and the indicators remained relatively low in the affected countries.

Despite the improving epidemiological situation, severe COVID-19 disease continue to burden healthcare systems in the EU/EEA. The rate of COVID-19 patients in hospital and ICU in the EU/EEA were 28% and 21%, respectively, of the maximum reported levels during the pandemic. Furthermore, a total of 1 001 COVID-19 deaths were reported from 26 EU/EEA countries in week 4.

This highlights the importance of booster doses of COVID-19 vaccines, particularly among vulnerable groups. Based on data reported to week 3, 2023, the cumulative uptake of a second booster was 35.0% (country range: 0.3–86.5%) among people aged 60 years and older in the EU/EEA.

Among the 10 countries with an adequate volume of sequencing or genotyping for weeks 2–3 (9 January to 22 January 2023), the estimated distribution of variants of concern (VOC) or of interest (VOI) was 48.5% (39.9–74.7% from eight countries) for BQ.1, 20.2% (8.1–36.4% from nine countries) for BA.2.75, 17.6% (6.4–68.6% from 10 countries) for BA.5, 4.2% (1.7–14.3% from seven countries) for XBB.1.5, 3.6% (1.1–7.3% from eight countries) for XBB, 1.1% (0.2–16.2% from nine countries) for BA.2 and 0.2% (0.1–1.0%, 36 detections from seven countries) for BA.4.

For the latest COVID-19 country overviews, please see the [dedicated web page](#).

Weekly update on SARS-CoV-2 variants:

Since the last update on 26 January 2022 and as of 2 February 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](#).

ECDC assessment of the XBB.1.5 sub-lineage

XBB.1.5 is a sub-lineage of XBB with an additional spike RBD mutation S486P. This lineage was first detected in the United States with the sample collection dated from 22 October 2022, and this lineage has been seen increasing in numbers since then. The parental lineage XBB and its sub-lineages including XBB.1.5 are categorised as a variant of interest (VOI) [1].

As of 30 January 2023, 21 864 sequences have been deposited in GISAID EpiCoV belonging to XBB.1.5 lineage. Most of these submissions are from the United States (16 865 sequences), and the United Kingdom (1 404 sequences).

The [US CDC nowcast system](#) estimates the current proportion of the variant at around 61.3% (previous week 49.1%) in the USA. For the last week with complete data (week 1 2023), the US CDC reports 26% XBB.1.5 (previous week 17%).

This lineage is currently estimated to have a large growth advantage relative to previously circulating lineages in North America (64%) and Europe (82%) (estimates provided by [CoV-spectrum](#) based on data from GISAID EpiCoV), though these estimates are associated with significant uncertainty. The US CDC reports a doubling time of the proportion of XBB.1.5 of nine days. The rapid growth in the US does not necessarily mean that the variant will become dominant in the EU/EEA, major differences in variant circulation between North America and Europe have been observed several times before during the pandemic.

The most likely explanation of the growth advantage is the already high level of immune escape demonstrated by XBB, combined with the effect of the spike change S486P. This mutation has previously been rare during the pandemic, probably due to it requiring two nucleotide substitutions in the same codon to change from Phenylalanine to Proline. Other variants with this change have however emerged before without becoming

successful. A recent [preprint](#) demonstrates that XBB.1.5 is not associated with a higher reduction in neutralisation by vaccine and convalescent sera compared to XBB.1, but that it is associated with a higher ACE2 affinity, which could indicate that the advantage of XBB.1.5 compared to XBB.1 could be caused by an increase in intrinsic transmissibility. Further laboratory and epidemiological investigations are required to elucidate the mechanism of the growth advantage conferred by this change specifically in the XBB variant. There is currently not enough information available to assess any change in infection severity associated with the variant.

Based on GISAID EpiCoV data as of 30 January 2023, XBB.1.5 is increasing in proportion in most EU/EEA countries with adequate sequence reporting volume. The estimated proportions for week 2 2023 and week 1 2023 (in parenthesis) are: Austria 3.5% (0.9%), Belgium 2.3% (1.4%), Denmark 2.9% (2.9%), Finland 2.6% (1%), France 2.2% (1.5%), Germany 4.2% (2.5%), Iceland 7.4% (7.4%), Ireland 15% (8.5%), Italy 1.4% (1.6%), Luxembourg 4.7% (4.5%), the Netherlands 9% (3.8%), Poland 2.4% (6.1%), Slovenia 2.8% (1.9%), Spain 5.4% (3.7%) and Sweden 1.5% (0.6%). The presence of XBB.1.5 in the EU/EEA accounts for a proportion between 1.4% and 15% in the countries with reported data.

There is a risk that this variant may have an increasing effect on the number of cases of COVID-19 in the EU/EEA, but not within the coming month as the variant is currently only present at very low levels. Due to uncertainties associated with the growth rate of the variant, this assessment is associated with a high degree of uncertainty. A threat assessment brief on XBB.1.5 has been published 13 January 2023.

There is a risk that this variant may have an increasing effect on the number of cases of COVID-19 in the EU/EEA, but not within the coming month as the variant is currently only present at very low levels. Due to uncertainties associated with the growth rate of the variant this assessment is associated with a high degree of uncertainty. [A threat assessment brief on XBB.1.5 has been published 13 January 2023.](#)

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](#), [twelfth](#), [thirteenth](#), and [fourteenth](#) 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, 8 July 2022, 13 October 2022, and 27 January 2023 respectively. The Committee concluded during these meetings that the COVID-19 pandemic continues to constitute a PHEIC.

For the latest COVID-19 country overviews, please see the [dedicated web page](#).

Please refer to the [data reported by World Health Organization \(WHO\)](#) on COVID-19 and [WHO's Weekly Epidemiological Updates and Monthly Operational Updates](#) page for non-EU/EEA countries.

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 spread and potential impact of the SARS-CoV-2 Omicron variant of concern in the EU/EEA, 19th update](#)'.

Detailed country-specific COVID-19 updates are available on ECDC's [website](#). For the latest update on SARS-CoV-2 variants of concern, please see [ECDC's webpage on variants](#).

ECDC invites countries to use the EpiPulse event on BQ.1 and sub-lineages to discuss and share information on this variant as it becomes available. Of particular interest is information on virus characterisation and evidence regarding changes in disease severity, virus transmissibility, immune evasion, and effects on diagnostics and therapeutics. Case reporting should continue through TESSy.

Further information:

COVID-19 associated with SARS-CoV-2 – China – 2022 - 2023

Sources: [China CDC](#), [media](#), [media](#), [media](#), [media](#), [GISAID](#)

Update

According to the [COVID-19 WHO dashboard](#) since 2 February 2023, 98 559 917 cases and 111 674 deaths have been reported to WHO from China.

On 1 February 2023, the China CDC published an [update](#) on the COVID-19 situation in mainland China. According to the report on 30 January there were 24 000 positive PCR tests and 2 848 antigen tests (positivity rate 2.5% and 2.2%, respectively). The total number of hospitalised cases on 30 January was 144 000 (91.1% decline from the peak on 5 January 2023) and 434 deaths were reported on the same day (decline of 89.8% from the peak on 4 January 2023).

Information on variants from public sources

From 1 January 2022 to 3 February 2023, China has deposited 10 418 sequences. As of 3 February 2023, of the total 10 418 sequences submitted from China, 3 626 had recent sample collection dates between 1 January 2022 and 29 January 2023 in GISAID EpiCoV. 4.2% of these sequences are reported local cases, 0.1% are imported cases and 95.7% are not reported as either local or imported.

These sequences mainly belonged to the lineages (including their sub-lineages) BA.5.2 (73%), BF.7 (26%), BQ.1 (0.2%), BA.5.1 (0.4%), BA.2.75 sub-lineages including BN.1, CH.1.1 and others (0.2%), XBB (0.1%).

Several new sub-lineages of Omicron have been assigned from sequence data released by China, which is expected as the virus accumulates random mutations. Most of these lineages carry no spike protein changes compared to previously known lineages, while a few sub-lineages of BF.7 carry single spike protein changes, a part of BF.7.14.1 carries V83F, BF.7.14.2 carries Q14H and BF.7.14.3 carries S626V. None of these changes are likely to provide the virus with a substantial transmission advantage and none of the associated lineages show signs of rapid expansion.

On 4 January 2023, a [statement](#) was issued by the WHO Technical Advisory Group on Virus Evolution (TAG-VE) that met on 3 January 2023.

Other News

France, Greece, Italy, and Sweden have extended the testing requirement for entry to those traveling from China. [France](#) until 15 February 2023, [Greece](#) until 14 February 2023, [Italy](#) until 28 February and [Sweden](#) until 18 February 2023.

Summary

The number of COVID-19 cases has reached record levels in mainland China. There continues to be limited data on COVID-19 cases, hospital admissions, deaths and ICU capacity and occupancy in China. High levels of SARS-CoV-2 infections and increased pressure on healthcare services in China are anticipated due to low population immunity and the relaxation of non-pharmaceutical interventions. Projection models published by the Institute for Health Metrics and Evaluation at the University of Washington anticipate steep increases in infections, hospitalisations, and deaths through April 2023. However, in the absence of more detailed and timely data from official sources on epidemiological indicators and sequencing, the public health impact, and the size and severity of the current surge of COVID-19 cases are difficult to assess.

Assessment

ECDC Assessment for the European Union (EU) / European Economic Area (EEA)

Given the higher population immunity in the EU/EEA, and the fact that the variants currently circulating in China have already been circulating in the EU/EEA, the current surge in cases of these variants in China is not expected to have any significant impact on the COVID-19 epidemiological situation in the EU/EEA. There are currently no data suggesting the emergence of new variants of concern in China. The ECDC assessment is based on the information currently available. ECDC will revisit its assessments as new information becomes available.

ECDC Actions

ECDC liaises on a regular basis with the European Commission and the Member States in the Health Security Committee.

ECDC is in contact with the China CDC on a regular basis to receive updated information on the epidemiological situation. ECDC is also in contact with the Public Health Agency of Canada (PHAC), the Japanese CDC, the Australian CDC, the US CDC as well as the WHO headquarters and the WHO Regional Office for Europe to cross-check and validate data and assessments with partners outside of China, including on sequencing data from Chinese travellers.

ECDC continues to routinely monitor and report on emerging SARS-CoV-2 variant threats via its Strategic Analysis of Variants in Europe (SAVE) Working Group, where variants and epidemiological trends in the EU/EEA as well as worldwide will continue to be evaluated. ECDC participates in the global WHO Technical Advisory Group on Virus Evolution (TAG-VE).

3. *C. diphtheriae* among migrants – Europe – 2022 - 2023

Overview:

Summary: As of 2 February 2023, and since the last update on 24 January 2023, 31 new cases of diphtheria among migrants have been reported from Germany.

Following the increase of diphtheria cases in migrants in the second half of 2022, ECDC adapted the TESSy metadata to allow for the reporting of additional variables, such as the country of origin of the case, if the

case is part of an ongoing cluster of cases, and whether the case shows resistance to antibiotic treatment. This is seen as a regular update of the metadata for routine diphtheria reporting, including after the end of the current outbreak. The uploading of data on cases linked to the ongoing outbreak in migrants should be prioritised. The mechanism to monitor the outbreak is the reporting of all diphtheria cases to TESSy on a monthly basis by the last day of each month. The data uploaded to TESSy will be published both in ECDC's online [Surveillance Atlas of Infectious Diseases](#) and in ECDC's weekly CDTR on a monthly basis.

Background: Since the beginning of 2022, and as of 2 February 2023, there have been 273 cases of diphtheria among migrants reported by eight EU/EEA countries: Austria (72), Belgium (25), France (14), Germany (147), Italy (2), the Netherlands (5), Norway (7) and Spain (1). Cases have also been reported in Switzerland (25) and the United Kingdom (73), bringing the overall number for Europe to 371.

Among these cases, more than two-thirds (71%) presented with an exclusively cutaneous form of the disease (n=265). A total of 55 cases had a respiratory presentation; of those, six cases had both respiratory and cutaneous presentations. Thirty cases were asymptomatic, and information was missing for 19 cases. All cases were caused by toxigenic *C. diphtheriae*, and the majority were detected in male migrants aged 8–49 years.

ECDC has no data indicating further transmission and outbreaks of *C. diphtheriae* in the broader EU/EEA population resulting from the increased number of diphtheria cases.

On 3 November 2022, [a rapid communication](#) published in *Eurosurveillance* reported two *C. diphtheriae* isolates in Switzerland possibly linked to the increase observed in the EU/EEA, and an unusually broad predicted resistance to common oral and parenteral antibiotics. According to the authors, these findings challenged the treatment options for bacterial co-infections in the wounds of the cases.

On 11 November 2022, the United Kingdom Health Security Agency (UKHSA) published updated guidelines on the [public health control and management of diphtheria in England](#), followed by the publication of a [supplementary guidance](#) document (in December 2022) for cases and outbreaks in asylum-seeker accommodation settings.

On 17 November 2022, [another rapid communication](#) was published in *Eurosurveillance*, in which phenotypic and predicted resistance data from cases in Germany confirmed the predicted resistance profile observations from the two isolates in Switzerland.

On 1 December 2022, the UK HSA published '[Supplementary guidance for cases and outbreaks in asylum seeker accommodation settings](#)', in which antimicrobial susceptibility testing of all *C. diphtheriae* isolates is recommended.

ECDC assessment:

Diphtheria is a rare disease in EU/EEA countries. According to [WHO/UNICEF](#), immunisation coverage estimates for diphtheria tetanus toxoid and pertussis (DTP3) in 2021 in the EU/EEA varied across Member States, ranging from 85% (Austria) to 99% (Greece, Hungary, Luxembourg, Malta, and Portugal). Universal immunisation is the only effective method for preventing the toxin-mediated disease. This includes the administration of a booster dose of diphtheria toxoid if more than 10 years have passed since the last dose. The occurrence of the disease in fully-vaccinated individuals is very rare.

The increase in cases reported among this group and the recent occurrence of similar outbreaks in several EU/EEA countries is unusual and needs to be carefully monitored alongside the implementation of necessary public health measures to avoid the occurrence of more cases and further spread.

In this context, the probability of developing the disease is very low for individuals residing in the community, provided they have completed a full diphtheria vaccination series and have an up-to-date immunisation status. Nevertheless, the possibility of secondary infections in the community cannot be excluded and severe clinical diphtheria is possible in unvaccinated or immunosuppressed individuals.

In exposed unvaccinated or immunosuppressed people in migrant centres, a severe outcome following a diphtheria infection is possible. Nevertheless, the impact of the disease for people with a completed course of diphtheria vaccination is considered to be low. Given the moderate probability of exposure and the potential individual impact as described above, the risk is considered to be moderate for unvaccinated or immunosuppressed people in migrant reception centres or other similar crowded settings in the EU/EEA, but low for fully vaccinated people in those settings.

The occurrence of isolates (in other European countries) showing a genomic profile suggestive of antimicrobial resistance similar to that observed in Switzerland and Germany cannot be ruled out. However, [these findings](#) are preliminary and more evidence would be needed before assessing the potential implications of these observations, including the adaptation of the currently recommended antibiotic treatment regimes. In view of these ongoing developments, ECDC recommends, as a precautionary measure, that antimicrobial susceptibility testing is performed on all *C. diphtheriae* isolates.

On 6 October 2022, ECDC published a [Rapid Risk Assessment \(RRA\)](#) on the increase of reported diphtheria cases among migrants in Europe due to *Corynebacterium diphtheriae*, stressing the importance of universal immunisation with diphtheria toxoid-containing vaccines. Options for responses recommended in this RRA included:

- Identification and vaccination of individuals residing in migrant centres who have incomplete vaccination status.
- Provision of information to migrant centres' health service providers for the rapid identification and isolation of possible cases pending diagnostic confirmation.
- Respiratory droplet isolation of all confirmed or suspected cases with respiratory diphtheria.
- Contact precautions, such as avoiding contact with wounds and the dressing of wounds, for confirmed and suspected cases of cutaneous diphtheria.
- Isolation of all confirmed cases (respiratory and cutaneous presentation) until the elimination of the organism is demonstrated by two negative cultures obtained at least 24 hours apart after the completion of antimicrobial treatment.
- Identification of close contacts, including the personnel providing assistance, especially if they have performed procedures without appropriate personal protective equipment (PPE).
- Antimicrobial post-exposure prophylaxis and vaccination of incompletely vaccinated or unvaccinated close contacts.
- Alerting clinicians to the possibility of cutaneous and/or respiratory diphtheria among migrants and travellers returning from endemic areas.
- Collection of data on the country of origin and migratory route from all suspected diphtheria cases.
- Up-to-date vaccination status for all personnel working in reception centres for migrants.
- Limiting situations of overcrowding in migrant centres, verification of the availability of laboratory diagnostics in each country.
- Timely reporting to authorities of cases confirmed according to the EU case definition for diphtheria.
- Enhanced surveillance, including molecular typing and whole genome sequencing of patient isolates to improve the understanding and monitoring of transmission patterns.

Additional ECDC tools may be of relevance during outbreak investigation activities, such as, the '[Expert Opinion on the public health needs of irregular migrants, refugees or asylum seekers across the EU's southern and south-eastern borders](#)', the '[Handbook on implementing syndromic surveillance in migrant reception/detention centres and other refugee settings](#)', and the '[Handbook on using the ECDC preparedness checklist tool to strengthen preparedness against communicable disease outbreaks at migrant reception/detention centres](#)'.

Actions:

ECDC continues to monitor this event through its epidemic intelligence activities and will provide weekly updates. The latest information available can be found on EpiPulse.

On 6 October 2022, ECDC published a [Rapid Risk Assessment \(RRA\)](#) on the increase of reported diphtheria cases among migrants in Europe due to *Corynebacterium diphtheriae*. The conclusions and options for response proposed in this RRA remain valid for this event. Additionally, on 5 December 2022, ECDC published an epidemiological update on the '[Increase of reported diphtheria cases among migrants in Europe due to *Corynebacterium diphtheriae*, 2022](#)'.

4. Mpox - Multi-country - 2022-2023

Overview:

Update:

Since the last update on 17 January 2023, and as of 31 January 2023, 23 mpox cases have been reported from eight EU/EEA countries: Spain (6), Denmark (4), Belgium (3), Italy (3), Sweden (3), France (2), Ireland (1) and Norway (1). No new cases have been reported from the Western Balkans and Türkiye.

News:

On 27 January, the BMJ journal Sexually Transmitted Infections [published](#) a case report describing an apparent second episode of mpox genital ulcerative disease in a non-immunosuppressed man who has sex with men (MSM) in South West England, who had completely recovered from a primary mpox infection four months previously. The patient had also received a complete two-dose course of smallpox vaccination between the two presentations.

Summary:

EU/EEA

Since the start of the mpox outbreak and as of 31 January 2023, 21 163 confirmed cases of mpox have been reported from 29 EU/EEA countries: Spain (7 528), France (4 127), Germany (3 676), Netherlands (1 260), Italy (954), Portugal (945), Belgium (793), Austria (327), Sweden (260), Ireland (228), Poland (215), Denmark (196),

Norway (95), Greece (86), Hungary (80), Czechia (71), Luxembourg (57), Romania (47), Slovenia (47), Finland (42), Croatia (33), Malta (33), Iceland (16), Slovakia (14), Estonia (11), Bulgaria (6), Latvia (6), Cyprus (5) and Lithuania (5).

Deaths have been reported from: Spain (3), Belgium (1) and Czechia (1).

Western Balkans and Türkiye:

Since the start of the mpox outbreak and as of 17 January 2023, the following Western Balkan countries have reported confirmed cases of monkeypox: Serbia (40), Bosnia and Herzegovina (9) and Montenegro (2). In addition, 12 cases have been reported from Türkiye.

Disclaimer: data presented in this update are compiled from TESSy.

A detailed summary and analysis of data reported to TESSy can be found in the [Joint ECDC-WHO Regional Office for Europe Mpox Surveillance Bulletin](#) published weekly.

Public Health Emergency of International Concern (PHEIC): On 23 July 2022, the Director-General of the World Health Organization (WHO) [declared](#) the global mpox outbreak a Public Health Emergency of International Concern (PHEIC). On 1 November 2022, [WHO](#) advised that the multi-country outbreak of mpox still met the criteria included in the definition of a PHEIC, as set out in Article 1 of the International Health Regulations (2005) (IHR).

ECDC assessment:

The weekly number of mpox cases reported in the EU/EEA peaked in July 2022, and since then a steady declining trend has been observed, reaching a plateau with very low numbers since week 52 2022.

Multiple factors have probably contributed to the decline, including efforts in risk communication and community engagement which have resulted in behavioural changes, increasing immunity in the most affected population groups due to natural immunity and vaccination, and a decrease in the number of large cultural and social events after the summer frequented by the main risk groups for this outbreak.

Based on evidence from the current outbreak and the declining number of new infections in the European region, the overall risk of mpox infection is assessed as moderate for MSM and low for the broader population in the EU/EEA.

Response options for EU/EEA countries include creating awareness among health professionals and supporting sexual health services to continue case detection, contact tracing, and management of cases; continuing to offer testing for orthopoxvirus; vaccination strategies and continuing risk communication and community engagement, despite the decreasing number of cases.

Given the limitations in vaccine supplies, primary preventive vaccination (PPV) and post-exposure preventive vaccination (PEPV) strategies may be combined to focus on individuals at substantially higher risk of exposure and close contacts of cases, respectively. PPV strategies should prioritise gay, bisexual, transgender people or other men who have sex with men, who are at higher risk of exposure, as well as individuals at risk of occupational exposure, based on epidemiological or behavioural criteria. Health promotion interventions and community engagement are also critical to ensure effective outreach and high vaccine acceptance and uptake among those most at risk of exposure.

Actions:

ECDC is closely monitoring the mpox epidemiological situation and will review the level of mpox risk of infection with the data that will be available in the coming weeks.

A [rapid risk assessment](#), 'Mpox multi-country outbreak', was published on 23 May 2022, the [first update](#) was published on 8 July 2022 and a [second update](#) was published on 18 October 2022. For the latest updates, visit [ECDC's mpox page](#).

ECDC offers laboratory support to Member States and collaborates with stakeholders on risk communication activities, such as targeted messaging for the general public and MSM communities. ECDC also provided guidance to countries hosting events during the summer. ECDC offers 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. Influenza – Multi-country – Monitoring 2022/2023 season

Overview:

Week 04/2023 (23 January – 29 January 2023)

- The percentage of sentinel primary care specimens from patients presenting with influenza-like illness (ILI) or acute respiratory infection (ARI) symptoms that tested positive for an influenza virus remained above the epidemic threshold (10%) and decreased to 21% from 23% in the previous week.
- 29 of 38 countries or areas reported high or medium intensity and/or widespread activity indicating substantial seasonal influenza virus circulation across the Region.
- Armenia, Bulgaria, France, Slovenia, Switzerland and the Republic of Moldova reported seasonal influenza activity above 40% positivity in sentinel primary care.
- Both influenza type A and type B viruses were detected, with A(H1)pdm09 viruses dominating in both sentinel and non-sentinel surveillance systems.
- Hospitalised patients with confirmed influenza virus infection were reported from ICU, other wards (with mainly influenza type A viruses reported) and SARI surveillance (with mainly influenza A(H1)pdm09 subtype viruses reported). Eight countries or areas reported influenza positivity rates above 10% in SARI surveillance.

Source: [Flu News Europe](#)

ECDC assessment:

Seasonal influenza activity is still widespread in the EU/EEA with overall decreasing intensity and positivity in sentinel specimens. Some countries in the central-eastern part are still experiencing high virus circulation. Influenza activity peaked in week 51, 2022 in the EU/EEA.

Actions:

ECDC and WHO monitor influenza activity in the WHO European Region. Data are available on the [Flu News Europe](#) website.

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

Overview:

Update: Since the previous update on 9 January 2023, and as of 30 January 2023, one new MERS-CoV case has been reported by Oman health authorities. The case was a primary case, with no contact with camels reported, and had onset of symptoms on 28 December 2022.

Summary: Since the beginning of 2023, and as of 30 January 2023, no MERS-CoV cases have been reported with date of onset in 2023 by health authorities worldwide or by the World Health Organization.

Since April 2012, and as of 30 January 2023, a total of 2 613 cases of MERS-CoV, including 945 deaths, have been reported by health authorities worldwide.

Sources: [ECDC MERS-CoV page](#) | [WHO MERS-CoV](#) | [ECDC factsheet for professionals](#) | [WHO updated global summary and assessment of risk \(November 2022\)](#) | [Qatar MoPH Case #1](#) | [Qatar MoPH Case #2](#) | [FAO MERS-CoV situation update](#) | [WHO DON Oman](#) | [WHO DON Saudi Arabia](#)

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 has 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.

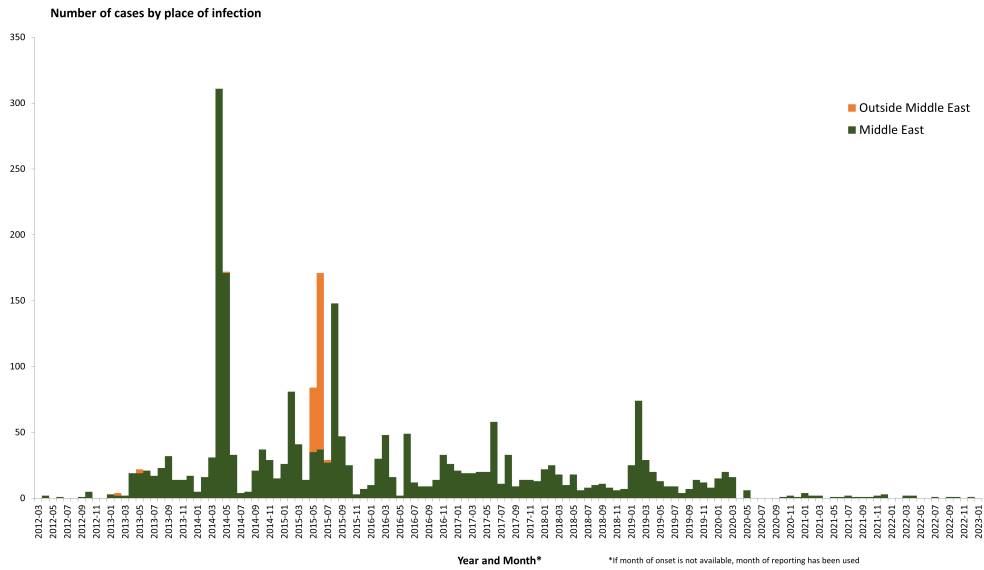
ECDC published a technical report [Health emergency preparedness for imported cases of high-consequence infectious diseases](#) in October 2019, which will be useful for EU Member States wanting to assess their level of preparedness for a disease such as MERS. ECDC also published [Risk assessment guidelines 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 it on a monthly basis.

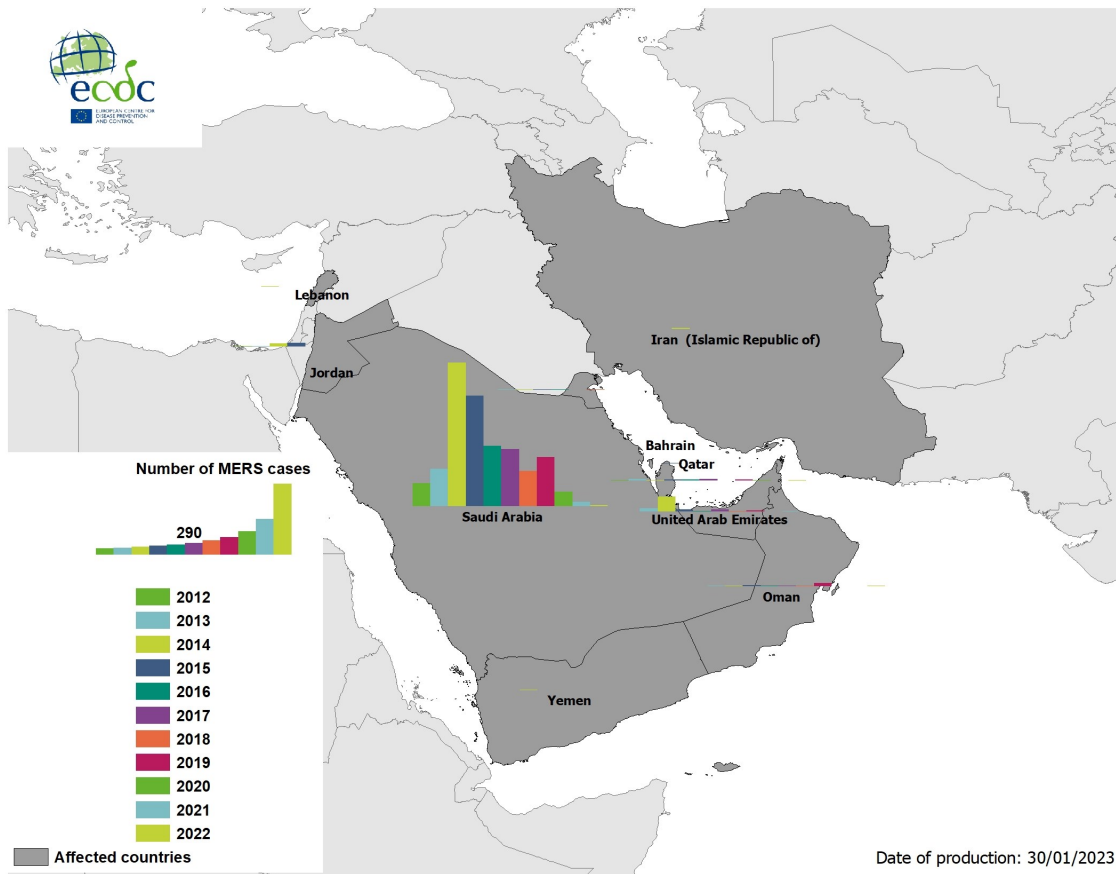
Maps and graphs

Figure 1. Distribution of confirmed cases of MERS-CoV by place of infection and month of onset, March 2012– January 2023



Source: ECDC

Figure 2. Geographical distribution of confirmed MERS-CoV cases by country of infection and year, from April 2012 to 30 January 2023



Source: ECDC

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

Overview:

Update: As of 1 February 2023 and since the previous case reported on 20 December 2022, three new cases of human infection with avian influenza A(H9N2) were reported from China:

- a 58-year-old man from Wugang, Henan province with onset of symptoms on 19 October 2022. The patient was in critical condition at the time of reporting, he is a farmer and had exposure in a live poultry market prior to onset of symptoms.
- a five-year-old girl from Dingxi, Gansu province with onset of mild symptoms on 23 October 2022. The exposure history is unknown.
- a three-year-old boy from Hainan, Anhui province with onset of mild symptoms on 13 November 2022. He had exposure to a live poultry market prior to his illness.

No other cases have been detected or reported among family members of these three cases.

Summary: To date, and since 1998, a total of 118 laboratory-confirmed cases, including two deaths, of human infection with avian influenza A(H9N2) viruses have been reported, from China (105), 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](#), [WHO Avian Influenza Weekly Update Number 877](#)

ECDC assessment:

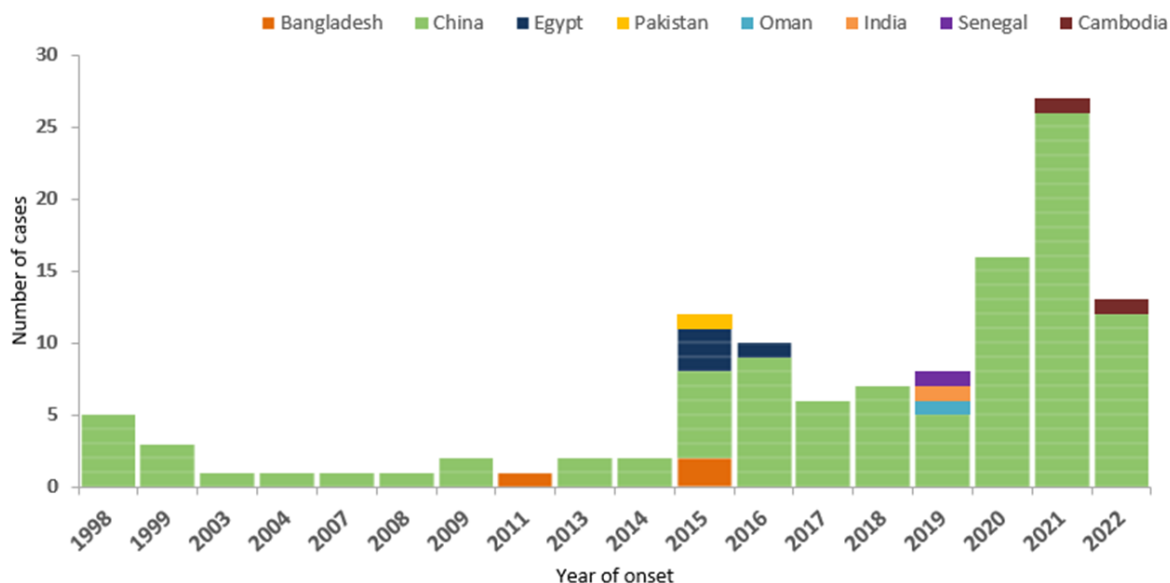
Sporadic human cases of avian influenza A(H9N2) have been observed, but no cases of human-to-human transmission have been documented. The use of personal protective measures for people directly exposed to poultry and birds potentially infected with avian influenza viruses will minimise the risk of infection. The risk of zoonotic influenza transmission to the general public in EU/EEA countries is considered to be very low as relevant A(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 experts and in collaboration with EFSA and the EU reference laboratory for avian influenza, 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 most recent report was published on 20 December 2022.

Maps and graphs

Figure 3. Distribution of confirmed human cases of avian influenza A(H9N2) virus infection by year of onset and country, 1998–02 February 2023 (n=118)



Source: ECDC

8. Human case with avian influenza A(H5) infection - Ecuador - 2022-2023

Overview:

On 10 January 2023, the Ministry of Public Health in Ecuador notified about a nine-year-old girl with a confirmed avian influenza A(H5) infection in Bolivar province. The girl was hospitalised in critical condition. She had contact with backyard poultry prior to the onset of symptoms on 25 December 2022.

Following the development of symptoms, the girl was brought to a local healthcare centre for evaluation and treatment on 27 December, and was admitted to hospital on 30 December due to persistent symptoms which included nausea, vomiting and constipation. Empirical treatment for meningitis was started with antibiotics and antipyretics in general hospital. On 3 January 2023, she was transferred with septic shock to a paediatric hospital where she was admitted to the intensive care unit (ICU) and was treated with antivirals and mechanical ventilation due to pneumonia.

A nasopharyngeal sample was taken on 5 January 2023 as part of SARI surveillance activities and tested positive for influenza A(H5) by reverse transcription-polymerase chain reaction (RT-PCR) on 7 January in the National Institute of Public Health Research (INSPI per its acronym in Spanish). Further characterisation is ongoing.

As of 17 January, the patient remains hospitalised, under isolation, and with non-invasive mechanical ventilation.

According to the epidemiological investigation, the family acquired backyard poultry, which died for unknown reasons on 19 December 2022. In addition, several incidents of dead poultry (chickens and ducks) have been reported in the same community. Moreover, on 1 December 2022, health [authorities](#) in Ecuador reported confirmed outbreaks of avian influenza A(H5) in farm and backyard poultry in Cotopax and Bolivar.

This is the first case of avian influenza infection reported in humans in Ecuador, including in Latin America and the Caribbean region.

The previous case of influenza A(H5) infection was reported from Vietnam in November 2022. The case was a four-year-old girl with severe symptoms and had contact with sick or dead poultry prior to her disease.

Source: [MoPH of Ecuador](#), [WHO DON](#)

ECDC assessment:

Sporadic human cases of different avian influenza A(H5Nx) subtypes have been previously reported globally. No human-to-human transmission has been documented so far. Transmission of avian influenza viruses to humans are rare events.

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 of zoonotic transmission of these viruses. The risk associated with A(H5) viruses also circulating in birds in the EU/EEA is considered to be low for the general population and low to medium for occupationally exposed people.

Actions:

ECDC monitors avian influenza strains through its epidemic intelligence and disease network activities and collaborates 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 recent report was published on 20 December 2022.

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

Overview:

Update: As of 02 February 2023, and since the last case reported in a monthly update on 19 October 2022, one new human case with avian influenza A(H5N6) virus infection was reported in China. The patient, a 54-year-old man from Changsha, Hunan province, developed symptoms on 2 November 2022 and was admitted to hospital in critical condition on 5 November 2022. The source of infection has not been identified at the time of reporting. Family members of the case did not develop influenza-like symptoms.

Summary: To date, 83 laboratory confirmed cases, including 33 deaths (CFR: 40%) of human infection with influenza A(H5N6) virus, have been reported since 2014. The cases were reported from China (82) and Laos (1).

Sources: [press release of the Government of the Hong Kong Special Administrative Region](#), [WHO Avian Influenza Weekly Update Number 877](#)

ECDC assessment:

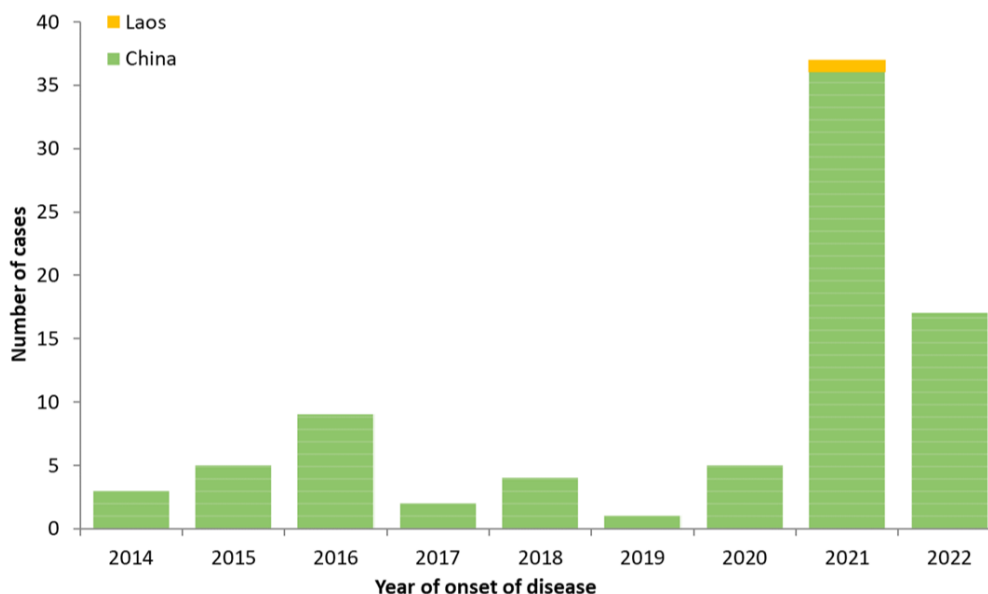
Sporadic human cases of avian influenza A(H5N6) have been previously observed. No human-to-human transmission has been reported so far. Sporadic zoonotic transmission cannot be excluded; the use of personal protective measures for people directly exposed to potentially infected poultry and birds with 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 and disease network activities and collaborates 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 recent report was published on 20 December 2022.

Maps and graphs

Figure 4. Distribution of confirmed human cases of avian influenza A(H5N6) virus infection by year of onset and country, 2014–02 February 2023 (n=83)



Source: ECDC

10. One case of Bovine spongiform encephalopathy (BSE) – The Netherlands – 2023

Overview:

Sources: Dutch Ministry of Agriculture, Nature and Food Quality (2)

[Letter to parliament bse-positive tested bovine | Parliamentary | Rijksoverheid.nl](#)

[Letter to Parliament on final result of BSE-positive bovine | Parliamentary | Rijksoverheid.nl](#)

Summary: On 1 February 2023, the Dutch Minister of Agriculture, Nature and Food Quality (Ministerie van Landbouw, Natuur en Voedselkwaliteit; LNV) informed the Dutch Parliament of the detection of a case of Bovine Spongiform Encephalopathy (BSE) in the cadaver of an eight-year-old cow in a cattle farm in the South Holland region. According to the LNV, the case was detected as part of routine active BSE surveillance, and no meat from the deceased animal entered the human food chain. The investigation carried out determined that the case was an atypical BSE. Classical BSE is linked to contaminated feed, whereas atypical BSE occurs spontaneously in older animals.

According to the LNV, the Netherlands Food and Consumer Product Safety Authority (NVWA) closed the farm on 30 January 2023. Additionally, a total of 13 other animals with possible epidemiological links to the index cow were traced. They will be culled and tested for BSE.

BSE is a fatal neurodegenerative disease in cattle, that may be passed on to humans as variant Creutzfeldt–Jakob disease (vCJD) via consumption of contaminated meat. The last reported case of BSE in the Netherlands dates back to 2011. According to the latest report by the [European Food Safety Authority \(EFSA\)](#), six cases of atypical BSE were reported in the EU/EEA in 2021: one in Germany, two in Spain, and three in France. Only two cases of classical BSE have been reported in Europe in the past five years, both in the United Kingdom (one in 2018 and one in 2021).

ECDC hosts the European Creutzfeldt–Jakob Disease Surveillance network (EuroCJD), which monitors the occurrence of variant CJD in humans in the EU/EEA. Human cases of vCJD have declined to close to zero since the peak of the vCJD epidemic in 2000–2001. The most recent case of vCJD was reported in France in 2021. Data on

vCJD cases are available in the [Surveillance Atlas of Infectious Diseases](#). In January 2023, ECDC provided a more detailed epidemiological overview of vCJD in a [technical report](#) on variant Creutzfeldt-Jacob disease in donors of blood and plasma having temporarily resided in or visited the United Kingdom.

The BSE case has been identified through the ongoing extensive BSE surveillance of cattle in the EU/EEA. This continues to provide assurance that there are no changes in BSE epidemiology which may give cause for increased concern about public health.

ECDC assessment:

This is a single report of an atypical BSE in an eight-year-old cow, which is not believed to be linked to human vCJD. According to the Dutch authorities, meat from the animal has not entered the human food chain, thus reducing the potential risk of infection to the general population in the EU/EEA to a minimum. Animals with potential common exposure have been traced and will be culled and tested for BSE. Due to the detection of classical BSE in recent years and a long incubation period of several years, continued monitoring of vCJD is necessary in the EU/EEA.

Actions:

ECDC is monitoring the event through epidemic intelligence activities.

11. Nipah virus - Bangladesh - 2023

Overview:

Summary: On 29 January 2023, media reports quoting health authorities in Bangladesh reported that eight people have been infected with Nipah virus (NiV) in Bangladesh, including the deaths of at least three adults and two children. All victims had histories of drinking date juice. Of the five deaths, two were from Goalanda and Baliakandi upazilas in Rajbari, one is from Godagari in Rajshahi, one was from Naogaon in Sadar, and one was from Ishwardi upazila in Pabna.

In Bangladesh, bats are the carriers of Nipah virus. The usual route of infection for humans is through the consumption of date or palm juice. Bangladesh authorities urged people to avoid date juice, according to the same media report.

Since 2001, Bangladesh has reported 333 cases including 235 deaths (CFR: 71%), according to the [Institute of Epidemiology, Disease Control and Research](#).

Background:

[Nipah virus](#) is a zoonotic virus of the family Paramyxoviridae, genus Henipavirus which can be transmitted to humans via contact with animals (such as bats, pigs), direct human-to-human contact, and consumption of contaminated food. Fruit bats in the Pteropodidae family are the natural host of the Nipah virus.

NiV infection can cause mild to severe disease with symptoms typically appearing four to 14 days following exposure to the virus. However, incubation periods as long as 45 days have been previously reported. Initial symptoms including fever, headache, myalgia, vomiting, sore throat, and difficulty breathing, and can be followed by more severe symptoms, such as disorientation, drowsiness, altered consciousness, and neurological signs that indicate acute encephalitis.

The case fatality usually ranges between 40 and 75% but can be higher depending on the NiV strain, the severity of the disease and the availability of adequate and high-quality healthcare facilities.

NiV was first isolated and identified in 1999 during an outbreak in Malaysia and Singapore. Since the initial detection, three countries described single or sporadic reoccurring outbreaks: Bangladesh, India and the Philippines. In Bangladesh and

India, the most likely sources of infection were fruits or fruit products (such as raw date palm juice) contaminated with urine or saliva from infected fruit bats. Human-to-human transmission was also reported.

Nipah is one of the nine priority diseases that WHO has assessed to pose the greatest public health risk due to their epidemic potential and/or where there is no or insufficient countermeasures.

Sources: [Nipah Virus Distribution Map](#) | [Nipah Virus \(NiV\)](#) , CDC, [Nipah virus \(who.int\)](#)

ECDC assessment:

The likelihood of exposure and infection by NiV for EU/EEA citizens travelling or residing in Bangladesh is currently very low. As a general precaution, EU/EEA travellers and residents in Bangladesh should not handle domestic or wild animals and avoid contact with their excreta. The virus may be present on food items contaminated by bats;

washing, peeling, and cooking fruit and vegetables before consumption is generally recommended. Raw date palm sap (juice) should not be consumed.

Although the disease is severe with a high fatality rate, the likelihood of exposure and infection by NiV for EU/EEA citizens travelling or residing in Bangladesh is currently very low. As a result, the risk of infection by NiV for EU/EEA citizens travelling or residing in Bangladesh is currently very low.

The most likely route of introduction of the virus into the EU/EEA would be via infected travellers. While importation of the virus cannot be excluded, it is currently very unlikely to occur. Should a case be imported, nonetheless, the likelihood of spread of the virus within the EU/EEA is considered to be very low. It should be highlighted that the natural reservoir host of NiV is not native to Europe. As stated above, the risk for the EU/EEA is considered to be very low.

The laboratory network EVD-LabNet has mapped the capability of its network members for the diagnosis of NiV infections and the result is available in [EVD-LabNet directory](#). Eleven countries within the EU/EEA can perform laboratory diagnostics for NiV infection.

Actions:

ECDC monitors this event through its epidemic intelligence activities.