

WEEKLY BULLETIN

Communicable Disease Threats Report

Week 7, 11–17 February 2024

This week's topics

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Executive Summary

Overview of respiratory virus epidemiology in the EU/EEA

- Syndromic surveillance in primary and secondary care indicate that respiratory activity remains elevated and above baseline levels, driven largely by influenza.
- All indicators pointed to continued high influenza activity in the EU/EEA.
 - Most reporting countries continue to be above the 10% sentinel primary care positivity threshold for influenza, with a mixture of increasing, stable and decreasing trends observed at the country level.
 - Notably, two countries have dropped below the 10% sentinel primary care positivity threshold following multiple weeks of decreasing trends at country level.
 - The majority of reporting countries observed medium or high levels of influenza intensity, widespread geographical spread and above-baseline rates of Influenza-like illness.
 - A(H1)pdm09 continues to be dominant in most countries.
- RSV activity was decreasing overall at the EU/EEA level, although the country-level picture remains mixed.
- SARS-CoV-2 activity was decreasing or low in all countries.

SARS-CoV-2 variant classification

Since the last update on 19 January 2024, and as of 16 February 2024, **no changes** have been made to ECDC's variant classifications for variants of concern (VOCs), variants of interest (VOIs), variants under monitoring (VUMs) and de-escalated variants.

The variant landscape in the EU/EEA is clearly dominated by high proportions of **BA.2.86**. As of 12 February 2024, the median proportion for BA.2.86 in the EU/EEA for week 4 (22 January 2024 to 28 January 2024) is 93.9% (range: 80–100%).

BA.2.87.1 lineage was classified as a VUM on 2 February 2024. Currently, a small number of sequences of this lineage (9) were identified in South Africa, with collection dates ranging from 20 September to 12 December 2023. As of 12 February 2024, BA.2.87.1 has not been detected outside South Africa. This lineage has been circulating in South Africa at low levels since September 2023, without any clear signs of an increase in proportions or an impact on epidemiological indicators. BA.2.87.1 is genetically distinct from currently circulating variants, carrying around 100 mutations compared with the parental lineage BA.2. It also has a distinct N-terminal domain in the spike protein, including several large deletions, and could therefore potentially be associated with a significant shift in antigenic properties. However, so far there are no virus neutralisation data available for BA.2.87.1 and further studies are needed to elucidate the properties of this variant. BA.2.87.1 is unlikely to have an impact on the epidemiological situation in the EU/EEA in the near future.

XBB.1.5-like+F456L lineages are circulating with a median proportion of 2.9% in EU/EEA countries (range: 0–12%). The overall proportion of XBB.1.5-like+F456L variants is declining in the EU/EEA.

XBB.1.5-like+L455F+F456L variants show a declining trend in the EU/EEA, with a median proportion of 2.1% (range: 0–12%).

Other **XBB.1.5-like** lineages are circulating in very low proportions and are declining in the EU/EEA, with a median proportion of 1.8% (range: 0–8%).

Monthly diphtheria epidemiological monitoring in the EU/EEA - 2023

- In 2024, and as of 12 February 2024, six cases of diphtheria have been reported in the EU/EEA through The European Surveillance System (TESSy). Cases have been reported in Czechia (4) and Norway (2).
- In 2023, and as of 12 February 2024, 170 cases of diphtheria have been reported in the EU/EEA through TESSy. Cases were reported in Germany (117), the Netherlands (14), Belgium (12), Czechia (7), Slovenia (4), Latvia (3), Norway (4), Sweden (3), Luxembourg (2), Slovakia (2), and Spain (2).
- Overall, and since the previous update on 8 January 2024, an increase of 19 cases has been reported. The new cases have been reported from Germany (10), Czechia (4), Norway (3), Slovakia (1), and Spain (1).
- Three of the cases reported in 2023 died: one in Belgium, one in Germany and one in Latvia.
- Since September 2022, and as of 12 February 2024, there have been 443 cases of diphtheria, including five deaths, in the EU/EEA, as reported to TESSy.
- ECDC has no data indicating community transmission of *Corynebacterium diphtheriae* as a result of the increased number of sporadic cases observed since the second half of 2022.
- Clinicians should continue to be aware of the clinical features of diphtheria and ensure timely diagnosis and treatment of cases according to existing clinical guidelines.
- An unusually broad predicted resistance of *C. diphtheriae* isolates to common oral and parenteral antibiotics has been reported. As a precautionary measure, ECDC recommends that antimicrobial susceptibility testing is performed on all *C. diphtheriae* isolates.

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

- In 2024, approximately 10 000 chikungunya virus disease (CHIKVD) cases and no deaths were reported worldwide. A total of eight countries reported CHIKVD cases from the Americas (6) and Asia (2).
- No autochthonous cases of CHIKVD were reported in Europe in 2024.
- In January 2024, over half a million dengue cases and over 100 dengue-related deaths were reported globally.
- No autochthonous/non-travel-associated dengue cases were reported in Europe in 2024.
- The current likelihood of local transmission events of chikungunya and dengue viruses occurring in areas where the vector is present in mainland EU/EEA is very low, as the environmental conditions are unfavourable for vector activity and virus replication in vectors.
- Doctors in the EU/EEA should be aware of the increased risk of dengue among travellers from affected countries presenting with compatible symptoms in order to ensure prompt diagnosis and clinical management of cases.

Influenza A(H5N1) – Multi-country (World) – Monitoring human cases

Summary:

- On 9 and 12 February, the Cambodian Ministry of Health reported two new human cases of avian influenza A(H5N1) infection, including one death. Overall, four cases have been reported in 2024 in Cambodia.
- Clade 2.3.2.1.c was detected in the sample of the deceased case (third case).
- No human-to-human transmission associated with these events has been reported.
- Clade 2.3.2.1c viruses have been circulating in Cambodia and caused human cases in 2023.
- Worldwide, 886 human cases of avian influenza A(H5N1), including 462 deaths (case-fatality rate (CFR): 52%), have been reported in 23 countries since 2004.
- The risk of zoonotic influenza transmission to the general public in the EU/EEA countries is considered low. The risk to occupationally exposed groups, such as farmers and cullers, is considered low-to-medium.

Human case of co-infection with seasonal influenza A(H3N2) and avian influenza A(H10N5) – China – 2024

- Update (16th February 2024): According to WHO, the deceased person had a contact with a live duck that she had slaughtered. Testing of remaining meat confirmed the presence of A(H10N5).
- On 30 January 2024, Chinese authorities reported a human case of co-infection with seasonal influenza A(H3N2) and zoonotic A(H10N5) in Zhejiang province.
- The case was a 63-year-old woman with multiple underlying conditions from Anhui province who developed symptoms on 30 November 2023 and died on 16 December 2023.
- The investigation by Chinese authorities did not find secondary cases among contacts.
- The risk to human health in the EU/EEA is currently assessed as very low.

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

- Since the previous update on 5 February, and as of 12 February 2024, four new MERS-CoV cases, including two fatalities, have been reported by the Ministry of Health in Saudi Arabia with date of onset in 2023.
- All cases were non-healthcare worker adults.
- Since the beginning of 2023, and as of 12 February 2024, six MERS-CoV cases, including two fatalities, have been reported with the date of onset in 2023 by Saudi Arabia (5) and the United Arab Emirates (1).

1. Overview of respiratory virus epidemiology in the EU/EEA

Overview:

Respiratory virus activity

- Consultation rates of patients presenting to general practitioners with respiratory illness (ILI and/or ARI) were reported by 19 EU/EEA countries in week 6. MEM thresholds were available for 17 of these countries (eight for ARI, 16 for ILI), with 14 countries reporting consultation rates above baseline levels in at least one indicator. ARI rates were low in one country, medium in two and high in one. ILI rates were low in four countries, medium in eight and high in one. Short-term forecasts of ILI and ARI rates in EU/EEA countries are published on [ECDC's RespiCast](#).
- In primary care sentinel settings, the median test positivity at the EU/EEA level was highest for influenza at 44% (pooled country data: 32%; interquartile range (IQR) of country values: 22–52%), with a mixture of increasing, stable and decreasing trends observed at the country level. Of 15 countries reporting at least 10 tests, 13 observed seasonal influenza activity above the 10% positivity threshold in sentinel primary care. Of 20 countries reporting qualitative assessments of seasonal influenza activity, all reported levels above baseline, including two with high and one with very high activity. Eighteen of 20 countries reported widespread geographical spread of seasonal influenza. Influenza detections from non-sentinel sources mirroring the trend observed in sentinel reporting.
- Among the 907 sentinel primary care detections of seasonal influenza, 872 (96%) were typed as influenza virus type A and 35 (4%) were typed as influenza virus type B. Of the influenza type A detections that were further subtyped, 499 (78%) were A(H1)pdm09 and 138 (23%) were A(H3). Eleven of the influenza type B detections were further defined as B/Victoria lineage, while the remaining 24 were of unknown lineage.

- The median sentinel primary care positivity for SARS-CoV-2 was 4% (pooled: 4%; IQR: 2–5%). This indicator has been decreasing since week 49, 2023. Both primary care sentinel and non-sentinel data at the country level show decreasing or stable trends in all countries reporting data to week 6.
- The median sentinel primary care RSV positivity was 5% (pooled: 6%; IQR: 3–6). Country-level variation was present, with some countries continuing to report elevated sentinel positivity and/or increasing or elevated counts of non-sentinel detections.

Severe disease

- Rates of severe acute respiratory infection (SARI) from sentinel secondary sites were higher than at the same time last year in one of the seven countries reporting data up to week 6. Six of the seven countries reported testing data for all three pathogens.
- The median SARI test positivity for seasonal influenza was 19% (pooled: 27%; IQR: 9–27%), with a decreasing trend compared to week 5 driven by a decrease in the majority of countries reporting this indicator. The pooled test positivity for seasonal influenza is decreasing but remains high in all age groups.
- The median SARI test positivity for RSV decreased to 10% (pooled: 10%; IQR: 6–15%). The highest pooled test positivity is observed in children aged 0–4 years and has been decreasing since week 52, 2023.
- The median SARI test positivity for SARS-CoV-2 decreased to 6% (pooled: 5%; IQR: 4–10%). Overall, rates for non-sentinel hospital admissions, ICU admissions and deaths have gradually decreased since week 50, with decreasing or stable trends in all reporting countries.
- [EuroMOMO](#) pooled estimates of weekly excess all-cause mortality showed a 'substantial elevated level of mortality, overall and in the age groups above 45 years of age'.

Virus characterisation

Influenza

WHO recommends that trivalent vaccines for use during the 2023–2024 influenza season in the northern hemisphere contain the following (egg-based and cell culture or recombinant-based vaccines respectively): an A/Victoria/4897/2022 or A/Wisconsin/67/2022 (H1N1)pdm09-like virus (subclade 5a.2a.1); an A/Darwin/9/2021 or A/Darwin/6/2021 (H3N2)-like virus (clade 2a); and a B/Austria/1359417/2021 (B/Victoria lineage)-like virus (subclade V1A.3a.2).

From week 40, 2023 to week 6, 2024, 1 283 A(H1)pdm09, 488 A(H3) and 59 B/Victoria viruses from sentinel and non-sentinel sources were genetically characterised. Of the A(H1)pdm09 viruses that have been assigned to a clade, 717 were reported as clade 5a.2a and 559 were subclade 5a.2a.1. Of the A(H3) viruses that have been assigned to a clade, eight were reported as clade 2a.3a, 475 were subclade 2a.3a.1, one was subclade 2a.3b and one was subclade 2a. All B/Victoria viruses were reported as subclade V1A.3a.2.

Antigenic characterisation data presented in the WHO southern hemisphere vaccine composition report indicate current northern hemisphere vaccine components are well matched to circulating 5a.2a and 5a.2a.1 A(H1N1)pdm09 subclades and V1A.3a.2 B/Victoria subclades. Whilst components also appear well matched for 2a.3a A(H3) clade viruses, those expressing 2a.3a.1 or 2b HA genes may be less well matched. Clade-specific influenza vaccine effectiveness data from human studies are awaited.

SARS-CoV-2 variants for weeks 3-4 (15-28 January 2024)

The estimated distribution (median and IQR of proportions from 13 countries) of variants of concern (VOCs) or variants of interest (VOIs) was 92% (90–98%) for BA.2.86 (which includes JN.1 isolates), 2% (2–7%) for XBB.1.5+F456L and 0% (0–2%) for XBB.1.5-like. The proportion of BA.2.86 continues to grow, with XBB.1.5-like+F456L and XBB.1.5 showing decreasing trends.

Period overview (week 25, 2023 to week 6, 2024)

Following relatively low respiratory illness activity over the summer period, consultation rates increased in primary care settings from September. Transmission of SARS-CoV-2 began increasing in late summer, with clear increases observed at the EU/EEA level up to week 49 and decreases in activity thereafter. Currently, activity is decreasing or low in all countries. In terms of severe disease, COVID-19 predominantly had an impact on individuals aged 65 years and above. Week 50 marked the start of the seasonal influenza epidemic. Activity remains high, with a mixed picture in trends for sentinel weekly test positivity at the country level. Severe disease due to influenza has had an impact on all age groups, but the most severe outcomes were observed in older adults. Both influenza type A and type B viruses have been detected, with a dominance of A(H1)pdm09 viruses in most countries and A(H3) dominant or co-dominant in a few countries. RSV activity began increasing around week 41, reaching a peak in week 50 followed by a decreasing trend. In recent weeks, a mixed epidemiological picture has been observed, with

increasing and decreasing trends at the country level. RSV continues to have the greatest impact among children aged 0–4 years.

ECDC assessment:

After marking the start of the seasonal influenza epidemic in the EU/EEA in week 50, 2023, seasonal influenza continued to circulate at higher levels than SARS-CoV-2 and RSV in week 6, 2024. It remains essential to closely monitor the impact on hospital and ICU admissions. The combined effect of co-circulating acute respiratory pathogens is likely to convey an increased burden of severe respiratory disease in the EU/EEA, which may result in further significant pressure on healthcare systems in the coming weeks.

Actions:

ECDC monitors rates of respiratory illness presentation and respiratory virus activity in the EU/EEA, presenting findings in the European Respiratory Virus Surveillance Summary ([ERVISS.org](https://erwiss.org)). Updated weekly, ERVISS describes the epidemiological and virological situation for respiratory virus infections across the EU/EEA and follows the principles of integrated respiratory virus surveillance outlined in [Operational considerations for respiratory virus surveillance in Europe](#).

ECDC has published an [epidemiological update](#) that describes the epidemiological situation of acute respiratory infections in EU/EEA countries and provides updated ECDC recommendations for mitigating their impact.

ECDC has published guidance on [vaccination roll-out for autumn/winter 2023](#), which stresses the importance of influenza and COVID-19 vaccination to protect individuals at increased risk of severe disease, e.g. people aged over 60 years and other vulnerable individuals (such as those with underlying comorbidities), irrespective of age.

Sources: [ERVISS](#)

Last time this event was included in the Weekly CDTR: 9 February 2024

2. SARS-CoV-2 variant classification

Overview:

Weekly update on SARS-CoV-2 variants:

Since the last update on 19 January 2024, and as of 16 February 2024, **no changes** have been made to ECDC variant classifications for variants of concern (VOCs), variants of interest (VOIs), variants under monitoring (VUMs) and de-escalated variants.

The variant landscape in the EU/EEA is clearly dominated by high proportions of **BA.2.86**, which was classified as a VOI on 24 November 2023. As of 12 February 2024, the median proportion for BA.2.86 in the EU/EEA for week 4 (22 January 2024 to 28 January 2024) is 93.9% (range: 80–100%). Among the eight EU/EEA countries reporting at least 20 sequences to GISAID EpiCoV for week 4, the proportions of BA.2.86 lineages were as follows: Austria (90.6%), Belgium (100.0%), Czechia (100.0%), Denmark (100.0%), Finland (94.9%), France (90.8%), Germany (100.0%), Ireland (94.1%), Italy (93.8%), Netherlands (97.9%), Norway (100.0%), Poland (80.0%), Slovenia (72.2%), Spain (96.5%), and Sweden (92.3%)

A large proportion of the BA.2.86 sequences belong to the sub-lineage **JN.1**. As of 19 December 2023, due to its rapid increase in proportion, [WHO classified](#) JN.1 as a separate VOI from the parent lineage BA.2.86. The most probable driver of the success of BA.2.86-descendant lineages is immune escape in a population where immunity is increasingly derived from XBB-variants.

BA.2.87.1 lineage was classified as a VUM on 2 February 2024. Currently, a small number of sequences of this lineage (9) were identified in South Africa, with collection dates ranging from 20 September to 12 December 2023. As of 12 February 2024, BA.2.87.1 has not been detected outside South Africa. This lineage has been circulating in South Africa at low levels since September 2023, without any clear signs of an increase in proportions or an impact on epidemiological indicators. BA.2.87.1 is genetically distinct from currently circulating variants, carrying around 100 mutations compared with the parental lineage BA.2. It also has a distinct N-terminal domain in the spike protein, including several large deletions, and could therefore potentially be associated with a significant shift in antigenic properties. However, to date no virus neutralisation data are available for BA.2.87.1, and further studies are needed to elucidate the properties of this variant. BA.2.87.1 is unlikely to have an impact on the epidemiological situation in the EU/EEA in the near future.

As of 12 February 2024, and for week 4 2024, **XBB.1.5-like+F456L** lineages are circulating with a median proportion of 2.9% in EU/EEA countries (range: 0–12%). The overall proportion of XBB.1.5-like+F456L variants is declining in the EU/EEA.

XBB.1.5-like+L455F+F456L variants show a declining trend in the EU/EEA, with a median proportion of 2.1% (range: 0–12%). Virtually all the lineages are already included in the existing VOIs XBB.1.5-like+F456L, but those carrying L455F are being monitored specifically as this VUM.

Other **XBB.1.5-like** lineages are circulating in very low proportions and are declining in the EU/EEA, with a median proportion of 1.8% (range: 0–8%).

For the latest information on variants, please see ECDC's [webpage on variants](#).

Actions:

For the latest update on SARS-CoV-2 variant classifications, please see [ECDC's webpage on variants](#). Variant surveillance data, including the distribution of VOC and VOI variant proportions in the EU/EEA and detailed country-specific COVID-19 updates, are available as part of the [European Respiratory Virus Surveillance Summary \(ERVISS\)](#).

Last time this event was included in the Weekly CDTR: 9 February 2024

3. Monthly diphtheria epidemiological monitoring in the EU/EEA - 2023

Overview:

Summary: In 2024, and as of 12 February 2024, six cases of diphtheria have been reported in the EU/EEA through The European Surveillance System (TESSy). Cases have been reported in Czechia (4) and Norway (2). Five cases were caused by *Corynebacterium diphtheriae* and the remaining case was caused by *Corynebacterium ulcerans*. Four cases were reported with a cutaneous clinical presentation and for the remaining two cases the clinical presentation was reported as unknown. None of the cases had a recent travel history.

Additional cases have also been reported for the year 2023. In 2023, and as of 12 February 2024, 170 cases of diphtheria have been reported in the EU/EEA through TESSy. Cases have been reported in Germany (117), the Netherlands (14), Belgium (12), Czechia (7), Slovenia (4), Latvia (3), Norway (4), Sweden (3), Luxembourg (2), Slovakia (2), and Spain (2).

Overall, and since the previous update on 8 January 2024, an increase of 19 cases has been reported. The new cases have been reported from Germany (10), Czechia (4), Norway (3), Slovakia (1), and Spain (1).

Among the 170 cases reported in 2023, 130 cases were caused by *Corynebacterium diphtheriae* and the remaining 40 cases were caused by *Corynebacterium ulcerans*. Of the 170 cases, 147 had a cutaneous clinical presentation. These cases were from Germany (111), the Netherlands (11), Belgium (7), Czechia (5), Slovenia (4), Sweden (3), Norway (2), Spain (2), Latvia (1), and Slovakia (1). Fourteen cases had a respiratory presentation. These cases were from Germany (6), Belgium (4), Latvia (2), Czechia (1), and the Netherlands (1). Two cases had a cutaneous and respiratory presentation (the Netherlands). Two cases had a nasal presentation, and two cases were reported as another clinical presentation. For three cases, the clinical presentation was reported as unknown. In 2023, and as of 8 January 2024, three fatal cases – Belgium (1), Germany (1) and Latvia (1) – have been reported in the EU/EEA. Two of the fatal cases were attributed to *C. diphtheriae* infections and had a respiratory presentation, while the remaining fatal case was attributed to a *C. ulcerans* infection and had a cutaneous presentation.

Among the 170 cases of diphtheria reported in 2023, 57 cases were classified as imported from the following countries: Afghanistan (24), Syria (11), Sudan (2), Philippines (2), Turkiye (2), Croatia (1), Ethiopia (1), Eritrea (1), Indonesia (1), Iraq (1), Pakistan (1), Slovenia (1), and Thailand (1), and for eight cases the origin of importation was unknown. Eight cases were reported as import-related. Forty-five cases were not imported, and the importation status was unknown for 60 cases.

In 2022, 359 cases of diphtheria, including five deaths, were reported to TESSy in the EU/EEA. Cases were reported in Germany (171), Austria (62), France (60), Belgium (31), Slovakia (8), Norway (8), the Netherlands (6), Czechia (5), Sweden (4), Italy (3), and Spain (1). Among the cases reported in 2022, 318 cases of diphtheria,

including four deaths, were attributable to *C. diphtheria*, and 41 cases, including one death, were attributable to *C. ulcerans*. Of 359 cases, 247 had a cutaneous clinical presentation, 34 had a respiratory presentation, five had a cutaneous and respiratory presentation, three had a nasal presentation, four had another clinical presentation, and for 66 cases the clinical presentation was unknown. Among the 359 cases reported, 133 were classified as imported cases from Afghanistan (36), Syria (13), Serbia (8), Bulgaria (4), Czechia (4), Austria (3), Türkiye (4), Madagascar (2), Mali (2), Bosnia and Herzegovina (1), Comoros (1), Congo (1), France (1), Latvia (1), Liechtenstein (1), Nigeria (1), Poland (1), Senegal (1), Slovenia (1), Sudan (1), Switzerland (1), Thailand (1), Ukraine (1), and for 43 cases the origin of importation was unknown.

Since September 2022, and as of 12 February 2024, 443 cases of diphtheria, including five deaths, have been reported to TESSy in the EU/EEA.

ECDC has no data indicating community transmission of *Corynebacterium diphtheriae* as a result of the increased number of sporadic cases observed since the second half of 2022.

Other news: From 2 January 2023 to the end of January 2024, the [United Kingdom Health Security Agency \(UKHSA\)](#) reported 13 confirmed cases of diphtheria among asylum-seekers in England. No new cases were reported between November 2023 and January 2024.

No new cases of diphtheria have been reported by the [Switzerland's Federal Office of Public Health](#) in 2024, as of a national report on 5 February 2024. In 2023, Switzerland reported 28 confirmed cases of diphtheria in the country.

Disclaimer: *The monthly diphtheria epidemiological monitoring report published in the CDTR provides the most recent data on cases and outbreaks, based on information made publicly available by national public health authorities or the media in the EU/EEA, and detected during epidemic intelligence screening activities. This report also includes the data routinely submitted by 29 EU/EEA countries to TESSy.*

Background:

In 2023, and as of 12 February 2024, 170 cases of diphtheria, including three deaths, have been reported in the EU/EEA through TESSy.

Cases were reported in Germany (117), the Netherlands (14), Belgium (12), Czechia (7), Slovenia (4), Latvia (3), Norway (4), Sweden (3), Luxembourg (2), Slovakia (1), and Spain (2). The deaths were reported in Belgium (1), Germany (1), and Latvia (1). Among all the cases reported in 2023, 130 cases, including two deaths, were caused by *C. diphtheriae*, and the remaining 40 cases, including one death, were caused by *C. ulcerans*.

In 2022, 359 cases of diphtheria, including five deaths, were reported to TESSy in the EU/EEA. Among the cases reported in 2022, 318 cases of diphtheria, including four deaths, were attributed to *C. diphtheria*, and 41 cases of diphtheria including one death were attributed to *C. ulcerans*.

Following the increase in cases of diphtheria in migrants during 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, whether it 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, even 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 cases of diphtheria to TESSy on a monthly basis by the last day of each month. The data uploaded to TESSy are published both in ECDC's online [Surveillance Atlas of Infectious Diseases](#) and in ECDC's Communicable Disease Threats Report (CDTR) on a monthly basis.

ECDC assessment:

Diphtheria is a rare disease in EU/EEA countries. According to the [World Health Organization/United Nations Children's Fund \(WHO/UNICEF\)](#), the estimates of immunisation coverage for diphtheria/tetanus/toxoid and pertussis (DTP3) in 2022 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, as per national recommendations. The occurrence of the disease in fully-vaccinated individuals is very rare.

The increase in cases of diphtheria among migrants reported since the second half of 2022 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 that 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.

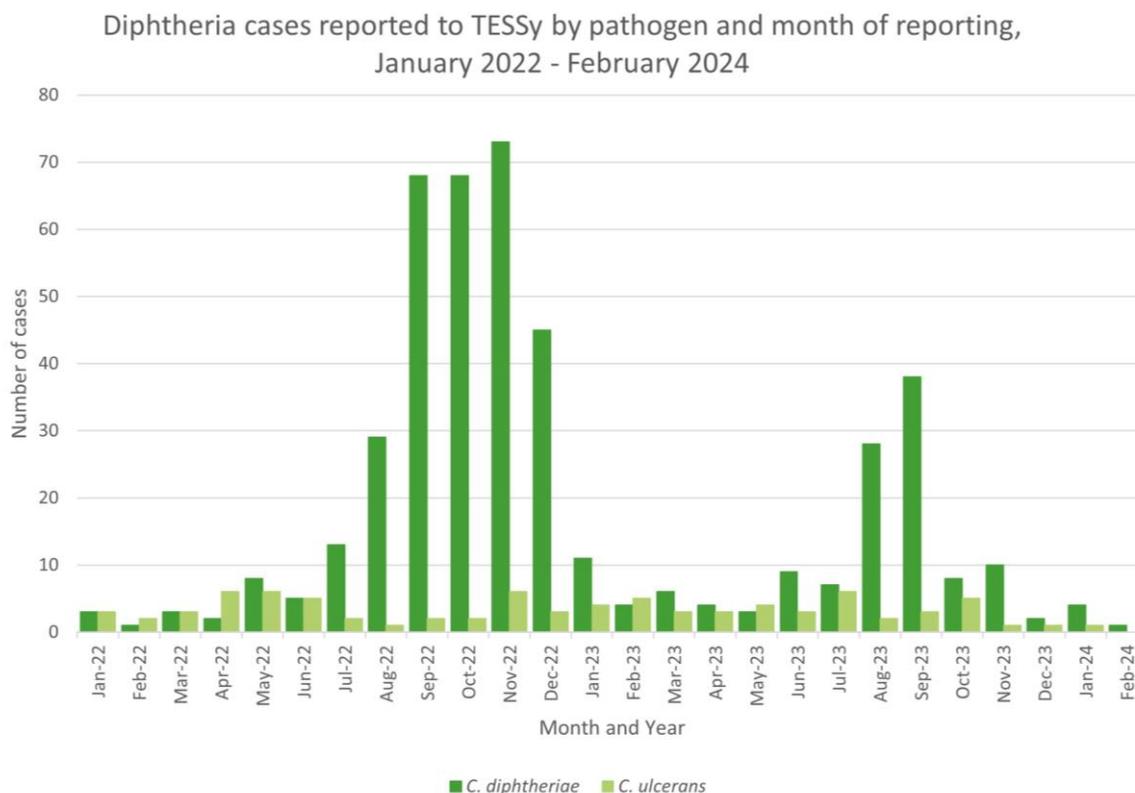
Recent scientific communications have reported the occurrence of isolates showing a genomic profile suggestive of antimicrobial resistance in **Switzerland** and **Germany**. **These findings** are preliminary and more evidence would be needed to assess the potential implications of these observations, including the adaptation of the currently recommended antibiotic treatment regimes. Nevertheless, similar observations in other European countries cannot be ruled out, and in view of these developments ECDC recommends that antimicrobial susceptibility testing is performed on all *C. diphtheriae* isolates as a precautionary measure.

Actions:

ECDC continues to monitor the diphtheria epidemiological situation in Europe. However, the monthly diphtheria reporting through the CDTR will be discontinued as of 14 February 2024, and will be resumed only in case of relevant epidemiological updates. The monthly diphtheria updates are still accessible through the **Surveillance Atlas of Infectious Diseases**.

Last time this event was included in the Weekly CDTR: 12 January 2024

Figure 1. Diphtheria cases reported to TESSy by pathogen and month of reporting, January 2022 - February 2024



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

Overview:

Chikungunya virus disease (CHIKVD)

In 2024, and as of 31 of January, approximately 10 000 CHIKVD cases and no deaths have been reported worldwide. A total of eight countries reported CHIKVD cases from the Americas (6) and Asia (2).

The majority of countries reporting high CHIKVD burden are from the Americas, in South and Central America. The countries reporting the highest number of cases are Brazil (14 189), Paraguay (973), Bolivia (60), and Colombia (13). Additional countries in the Americas reporting CHIKVD cases can be found at [PAHO's dedicated website](#).

Outside of the Americas, CHIKVD cases were reported in Asia from Timor Leste (195) and Malaysia (1).

No autochthonous cases of CHIKVD have been reported in Europe in 2023.

CHIKVD-associated deaths were reported from Brazil (3).

Dengue

In January 2024, over half a million dengue cases and over 100 dengue-related deaths were reported globally. Most cases were [reported](#) in the WHO PAHO region, with a cumulative number of 550 277 suspected cases reported in the first four weeks of 2024, showing an increase of 189% compared to the same period in 2023, according to the epidemiological bulletin of 8 February 2024. An upsurge of cases has been [reported in Brazil](#), where all four dengue serotypes are [circulating](#).

Vaccination efforts against dengue have started in Brazil in eligible municipalities and for children aged 10-11 years [according](#) to the Ministry of Health ([Technical Note, Ministry of Health, Brazil](#) and [Press Release, Ministry of Health, Brazil](#)).

Increased dengue circulation has been reported in French Guyana, with over 2 000 cases reported the first four weeks of 2024 ([Epidemiological Update, Guyane, 1/2/2024](#)). Dengue is still circulating also in Guadeloupe and Martinique as well as Saint Barthelemy and Saint Martin, with hospitalisations showing a decreasing trend after increases in the previous months ([Epidemiological Update in Guadeloupe, Martinique, St Martin, St Barthelemy, 8/2/2024](#)).

Dengue circulation was also reported in the WHO [South-East Asia](#) and [Western Pacific](#) Regions in January 2024. According to the [WHO SEARO bulletin of 7 February 2024](#), the number of cases reported from Bangladesh and Sri Lanka are within the expected levels, while in January 2024 Thailand reported a 7.3% increase in the number of cases compared to December 2023 (11 180 dengue cases and five deaths).

In Africa, dengue has been reported in 2024 in four African Union Member States, according to the [Africa CDC Weekly Event Based Surveillance Report, 10/2/2024](#).

Note

The data presented in this report originate from both official public health authorities and non-official sources, such as news media and depending on the source autochthonous and non-autochthonous cases may be included. Data completeness depends on the availability of reports from surveillance systems and their accuracy, which varies between countries. All data should be interpreted with caution and comparisons, particularly across countries, avoided, due to under-reporting, variations in surveillance system structure, varying case definitions between countries and over time, and use of syndromic definitions.

ECDC assessment:

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

The likelihood of onward transmission of dengue and chikungunya virus in mainland EU/EEA is linked to importation of the virus by viraemic travellers into receptive areas with established and active competent vectors (e.g. *Aedes albopictus* and *Aedes aegypti*). *Aedes albopictus* is [established](#) in a large part of Europe. *Aedes aegypti* is established in Cyprus, on the eastern shores of the Black Sea, and in the outermost region of Madeira.

The current likelihood of the occurrence of local transmission events of chikungunya and dengue viruses in areas where the vectors are present in mainland EU/EEA is very low, as the environmental conditions are unfavourable for vector activity and virus replication in vectors. In 2023, locally-acquired dengue cases were reported by France, Italy, and Spain.

All autochthonous outbreaks of [CHIVD](#) and [dengue](#) in mainland EU/EEA have so far occurred between June and November.

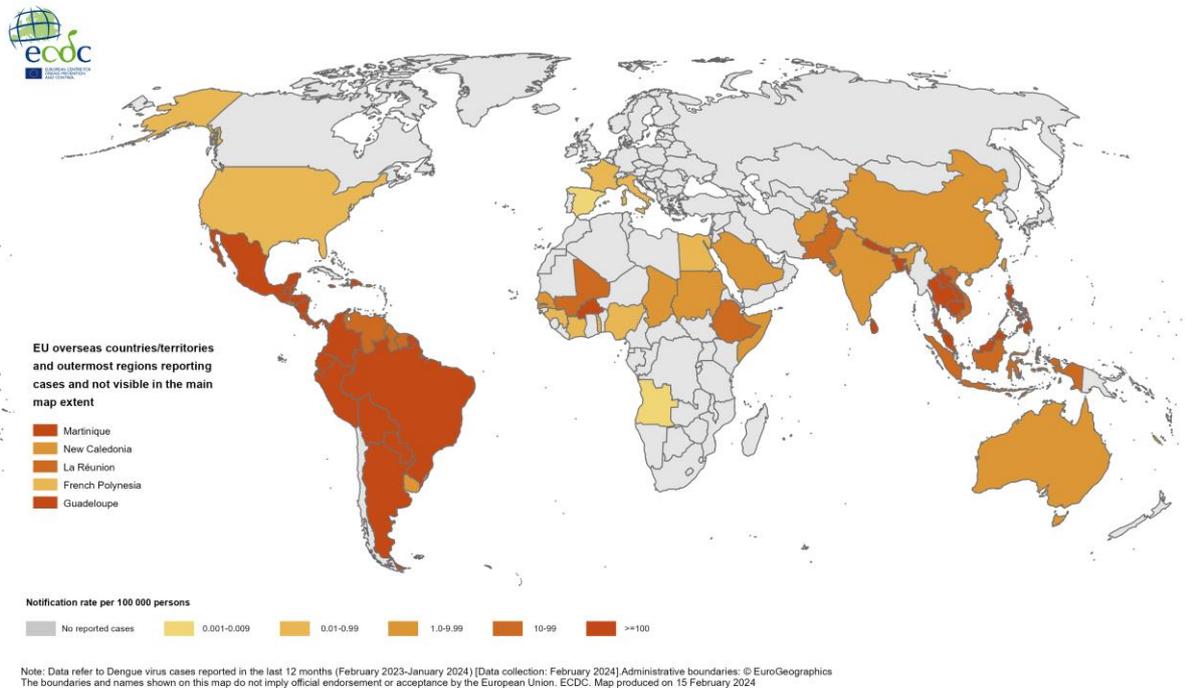
More information on autochthonous transmission of [chikungunya](#) and [dengue](#) virus in the EU/EEA is available on ECDC's webpages, and in ECDC's factsheets on [dengue](#) and [CHIKVD](#).

Actions:

ECDC monitors these threats through its epidemic intelligence activities, and reports on a monthly basis. A summary of the worldwide overview of [dengue](#) and [CHIKVD](#) is available on ECDC's website.

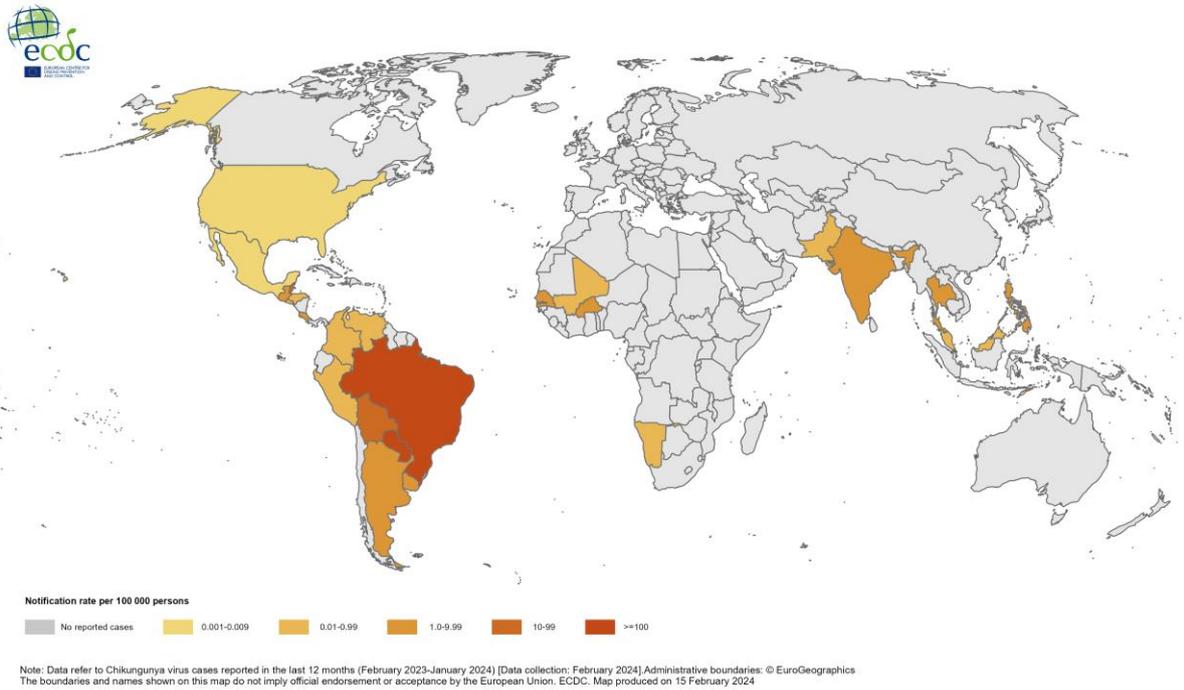
Last time this event was included in the Weekly CDTR: 12 February 2024

Figure 2. 12-month dengue virus disease case notification rate per 100 000 population, February 2023-January 2024



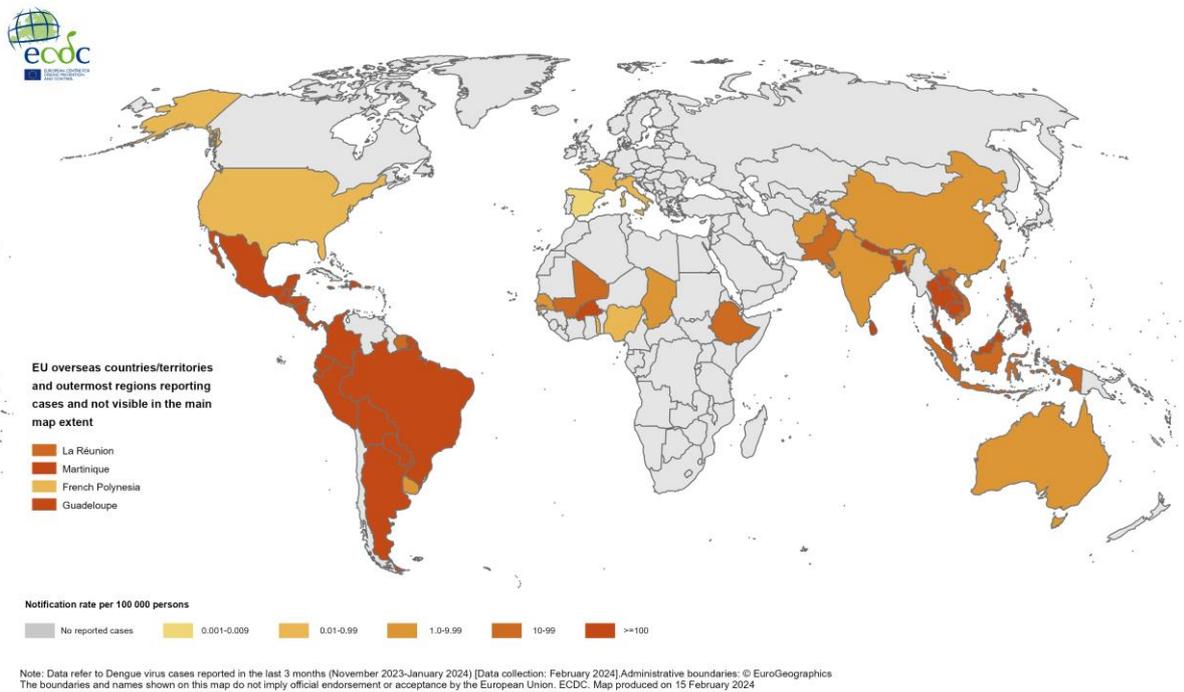
Source: ECDC

Figure 3. 12-month Chikungunya virus disease case notification rate per 100 000 population, February 2023-January 2024



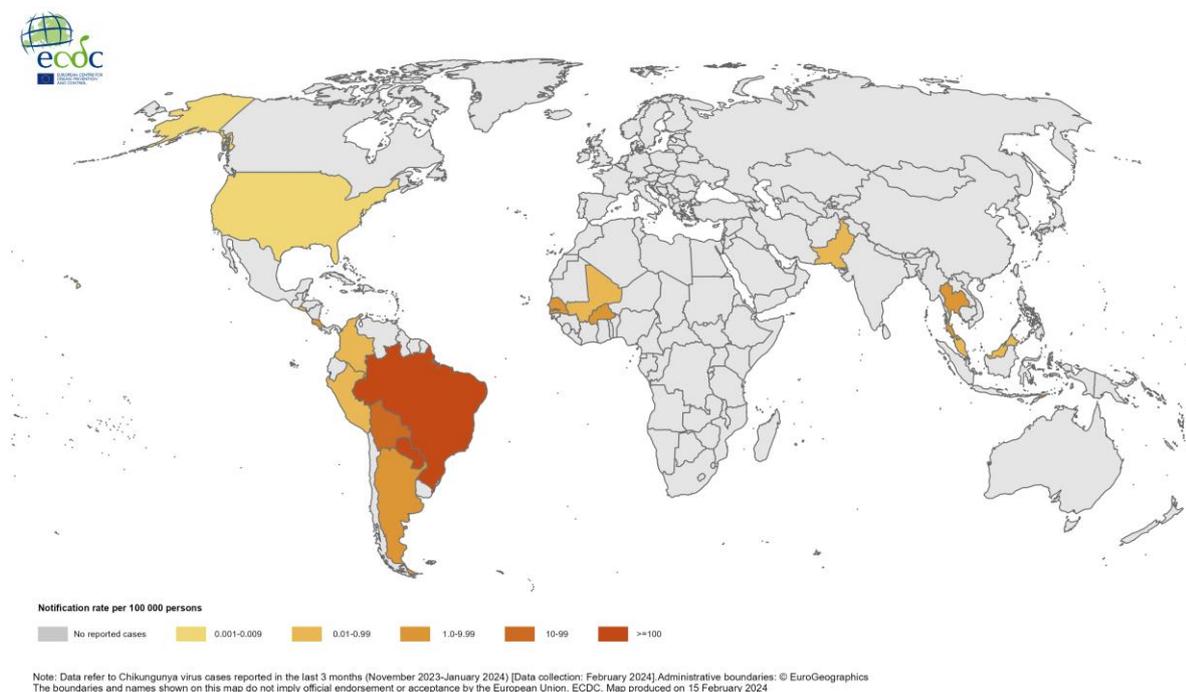
Source: ECDC

Figure 4. Three-month dengue virus disease case notification rate per 100 000 population, November 2023-January 2024



Source: ECDC

Figure 5. Three-month Chikungunya virus disease case notification rate per 100 000 population, November 2023-January 2024



Source: ECDC

5. Influenza A(H5N1) – Multi-country (World) – Monitoring human cases

Overview:

Update:

On 9 and 12 February, the Cambodian Ministry of Health reported two new human cases of avian influenza A(H5N1) infection, including one death. The cases are siblings aged nine and 16 years from a village within Kratié city, Kratié Province, Cambodia. One child developed symptoms (fever, shortness of breath, fainting) and died on 8 February 2024 due to avian influenza A(H5N1) infection confirmed by the National Public Health Institute. Clade 2.3.2.1.c was detected in the sample of the deceased case (3rd case) (GISIAD: ID EPI_ISL_18879683). His sibling was confirmed by the laboratory investigation and did not have respiratory symptoms at the time. According to the MoH report, there were dead chicken and ducks in the household that were consumed by the family prior to the onset of symptoms of the 9-year-old boy. Laboratory and epidemiological investigation is ongoing.

Summary:

In January and February 2024, Cambodia's Ministry of Health reported four human cases with avian influenza A(H5N1) infection, including one death, in an adult and three children less than 18 years of age from Kampong Trabek district (Prey Veng province), Puok district (Siem Reap province) and Kratié province. All cases in 2024 have had exposure to infected backyard poultry. Three cases were not epidemiologically related, the recent two cases were siblings. Out of the cases reported in 2024, two cases recovered, one died and one was asymptomatic. No new cases were detected among contacts of the first two cases, the closest contacts received prophylactic treatment with antivirals (Oseltamivir) and clade 2.3.2.1.c. was identified in both cases ([WHO DON](#)). Investigation is ongoing for the recent two cases.

To date, in 2024, Cambodia has reported four cases (one adult and three children), including one death, of human infection with avian influenza A(H5N1), for two of whom clade 2.3.2.1.c was confirmed. Overall, six cases, including three deaths, due to A(H5N1) were reported in Cambodia in 2023: two cases reported in February, two in October and two in November. Since 2005, Cambodia has reported 64 cases of avian influenza A(H5N1) infection, including

40 deaths (CFR: 64%). In cases detected in 2023 in Cambodia, virus clade 2.3.2.1c was identified (GISAID EPI_ISL_18540514).

As of 12 February 2024, there have been 886 human cases* worldwide, including 462 deaths (CFR: 52%), from infection with avian influenza A(H5N1) reported in 23 countries since 2004. To date, no sustained human-to-human transmission has been detected.

**Note: this includes six detections due to suspected environmental contamination and no evidence of infection that were reported in 2022 by Spain (2 detections) and the United States (1), as well as in 2023 by the United Kingdom (3).*

Sources: [MoH report on Facebook account \(4th case\)](#), [MoH report on Facebook \(3rd case\)](#), [WHO DON \(08 February 2024\)](#), [report on Facebook account of the MoH of Cambodia \(second case\)](#), [media report \(second case\)](#), [media report \(first case\)](#), [report on Facebook account of the MoH of Cambodia \(first case\)](#), [ECDC Avian influenza](#), [ECDC Avian influenza overview: Latest situation update of the avian influenza in the EU/EEA](#)

ECDC assessment:

Sporadic human cases of different avian influenza A(H5Nx) subtypes have previously been reported globally. Current epidemiological and virological evidence suggests that A(H5N1) viruses remain avian-like. Transmission to humans remains a rare event and no sustained transmission between humans has been observed.

Overall, the risk of zoonotic influenza transmission to the general public in EU/EEA countries is considered low. The risk to occupationally exposed groups, such as farmers and cullers, is considered low-to-medium.

Direct contact with infected birds or a contaminated environment is the most likely source of infection, and the use of personal protective measures for people exposed to dead birds or their droppings will minimise the remaining risk. The recent severe cases in Asia and South America in children and people exposed to infected, sick or dead backyard poultry underlines the risk of unprotected contact with infected birds in backyard farm settings. This supports the importance of using appropriate personal protective equipment.

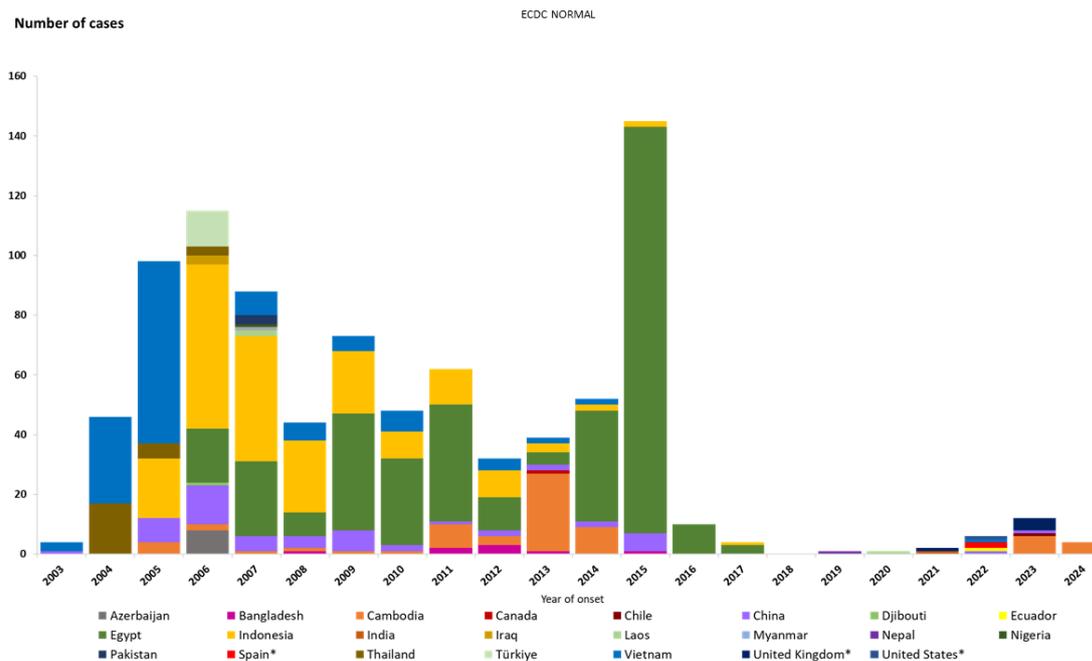
Actions:

ECDC monitors avian influenza strains through its influenza surveillance programme and epidemic intelligence activities in collaboration with the European Food Safety Authority (EFSA) and the EU Reference Laboratory for Avian Influenza in order to identify significant changes in the virological characteristics and epidemiology of the virus. Together with EFSA and the EU Reference Laboratory for Avian Influenza, ECDC produces a quarterly updated report of the [avian influenza situation](#).

Sources: [42877](#) | [2023-E000065](#)

Last time this event was included in the Weekly CDTR: 9 February 2024

Figure 6. Distribution of confirmed human cases of avian influenza A(H5N1) virus infection by year of onset and country, 2003 - 12 February 2024 (n=886)



Source: ECDC

6. Human case of co-infection with seasonal influenza A(H3N2) and avian influenza A(H10N5) – China – 2024

Overview:

Update (16 February 2024): According to information provided by [WHO](#) the deceased person with co-infection of seasonal A(H3N2) and avian A(H10N5) influenza viruses had contact with a live duck, which she purchased in a market on 26 November 2023 and later consumed. Laboratory investigation of the remaining duck meat stored in the fridge confirmed the presence of A(H10N5).

Summary: On 30 January 2024, the [National Disease Control and Prevention Administration in China](#) reported a human case of co-infection of influenza A(H3N2) and zoonotic A(H10N5) in Zhejiang province. The case is a 63-year-old woman from Xuancheng, Anhui province, with multiple underlying conditions. She developed symptoms (cough, sore throat and fever) on 30 November 2023, and was admitted to a local healthcare facility on 2 December due to worsening clinical conditions. On 7 December, she was admitted to a hospital in Zhejiang Province where she died on 16 December.

Microbiological investigations carried out at the laboratory in Zhejiang Province on 22 January 2024 revealed the presence of both seasonal influenza A(H3N2) and avian influenza A(H10N5). These findings were confirmed by China CDC on 26 January 2024.

No additional cases have been identified among close contacts of the case.

Chinese authorities have instructed Zhejiang and Anhui provinces to carry out prevention and control measures and organised experts to conduct risk assessments. According to the expert assessment in China, the whole genome analysis of the virus showed that the A(H10N5) virus was of avian origin and did not have the ability to effectively infect humans, and the case represented an occasional poultry-to-human cross-species transmission. Chinese authorities assessed the likelihood of the virus infecting people to be low and have not identified evidence of human-to-human transmission.

The sequences are available on GISAID (Isolate ID: EPI_ISL_18846022).

Background: This is the first documented human infection with avian influenza A(H10N5). This is a low pathogenic avian influenza virus and therefore the prevalence of the virus in birds is unknown.

Source: [National Disease Control and Prevention Administration, China](#), [WHO DON](#)

ECDC assessment:

This is the first human case of avian influenza A(H10N5) reported. No human-to-human transmission has been observed for this influenza subtype so far and the investigation of the current event has been finalised. Despite co-infection with A(H3N2) seasonal influenza virus in this patient, genomic analysis showed that the A(H10N5) influenza virus genes were all of avian influenza origin, showing no signs of reassortment.

The risk to human health in the EU/EEA is currently assessed as very low.

Direct contact with infected birds or contaminated environments is the most likely source of human infection with avian influenza. The use of personal protective measures for people exposed to sick or dead birds and their droppings will reduce the associated risk.

Actions:

ECDC monitors avian influenza strains through its epidemic intelligence and influenza surveillance activities in collaboration with the European Food Safety Authority (EFSA) and the EU reference Laboratory for Avian Influenza to identify significant changes in the epidemiology and characteristics of the virus. ECDC works with EFSA and the EU reference laboratory to produce a quarterly [report on the avian influenza situation](#). The [most recent report](#) was published in December 2023.

Sources: [2024-e000037](#)

Last time this event was included in the Weekly CDTR: 9 February 2024

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

Overview:

Update: Since the previous update on 5 February, and as of 12 February 2024, four new MERS-CoV cases, including two fatalities, have been reported by the Ministry of Health in Saudi Arabia with date of onset in 2023. All cases were non-healthcare worker adults. Two cases had no clear history of exposure to known risk factors and two were primary cases.

Summary: Since the beginning of 2023, and as of 12 February 2024, six MERS-CoV cases, including two fatalities, have been reported with the date of onset in 2023 by Saudi Arabia (5) and the United Arab Emirates (1).

As of 12 February 2024, no MERS-CoV cases have been reported by WHO or national health authorities with date of onset in 2024.

Since April 2012, and as of 12 February 2024, a total of 2 621 cases of MERS-CoV, including 949 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](#) | [WHO DON UAE](#) | [WHO DON Saudi Arabia](#) | [WHO EMRO MERS Situation report](#)

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 the [Rapid Risk Assessment](#) published by ECDC on 29 August 2018, which also provides details on the last case reported in Europe.

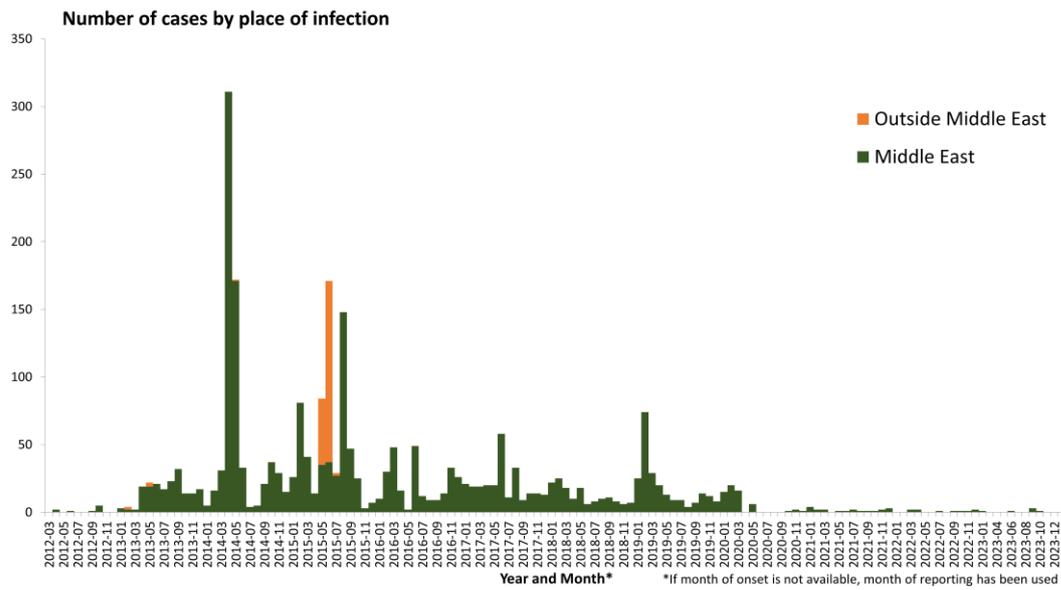
ECDC published a technical report, [Health emergency preparedness for imported cases of high-consequence infectious diseases](#), in October 2019, which is still useful for EU Member States wanting to assess their level of preparedness for a disease such as MERS-CoV. ECDC also published [Risk assessment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

Actions:

ECDC is monitoring this situation through its epidemic intelligence activities and reports on a monthly basis or when new epidemiological information is available.

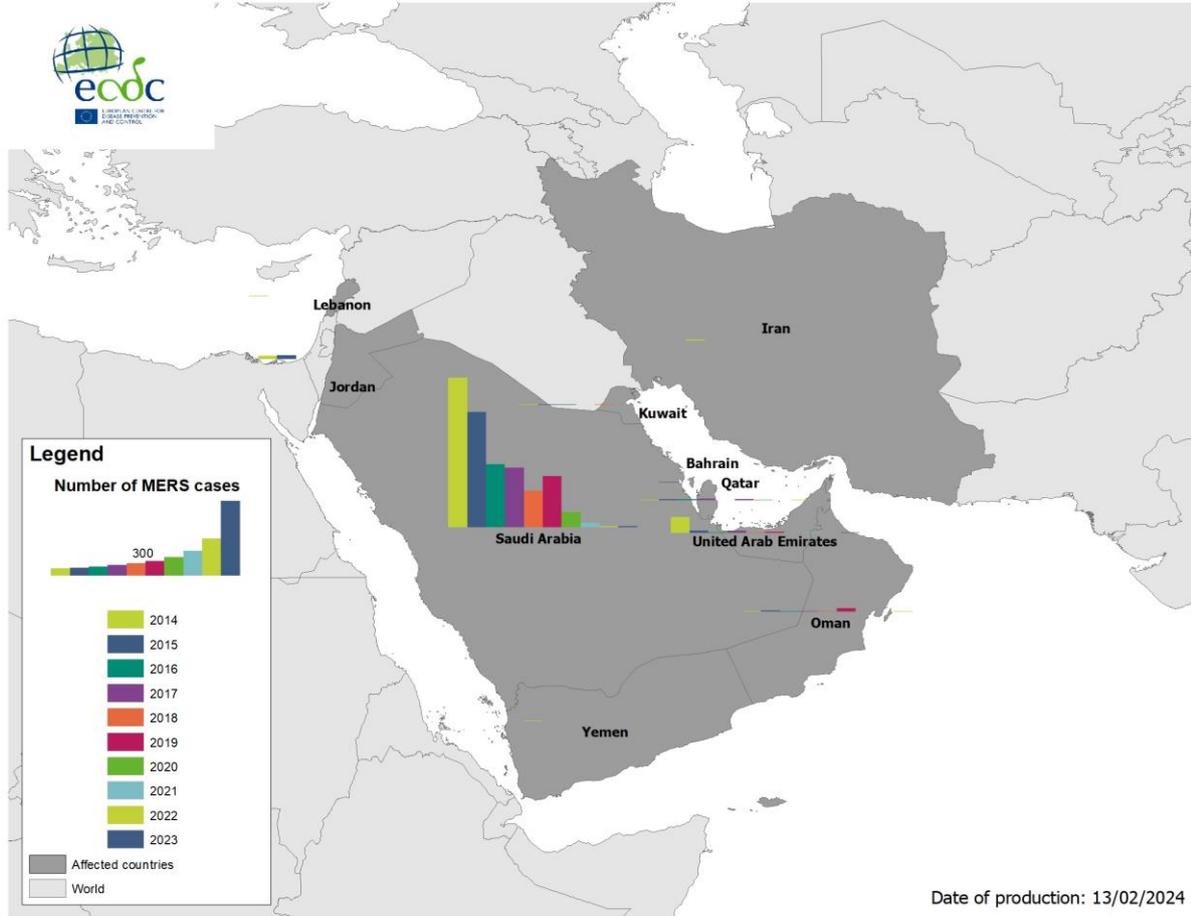
Last time this event was included in the Weekly CDTR: 9 February 2024

Figure 7. Distribution of confirmed cases of MERS-CoV by place of infection and month of onset, March 2012– January 2024



Source: ECDC

Figure 7. Geographical distribution of confirmed MERS-CoV cases by country of infection and year, from April 2012 to January 2024



Date of production: 13/02/2024

Source: ECDC