

## WEEKLY BULLETIN

# Communicable Disease Threats Report

## Week 15, 9–15 April 2023

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## 1. Weekly Summary

### Overview:

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

- One dog and five cats were detected with avian influenza A(H5N1) in Canada and the US, respectively. All these domesticated animals had contact with birds prior to symptom onset and death. Previously, a cat with A(H5N1) infection had been reported in France in December 2022.
- To date, no domesticated dog or cat-to-human transmission has been detected in relation to these events, and no human-to-human transmission has been detected.
- Overall, 874 human cases with avian influenza A(H5N1), including 458 deaths (CFR: 52.4%), have been reported in 23 countries since 2004.
- The risk of zoonotic influenza transmission to the general public in EU/EEA countries is considered to be low. The risk to occupationally exposed groups such as cullers has been assessed as low to medium.

#### **Marburg virus disease - Equatorial Guinea - 2023**

- As of 10 April 2023, one new confirmed case of Marburg virus disease (MVD) has been reported in Equatorial Guinea. The individual is deceased and was reported from Bata, Litoral province.
- Since the beginning of the outbreak, there have been 15 confirmed cases and 11 deaths.
- Epidemiological surveillance and contact tracing efforts are ongoing.
- WHO and partners are supporting Equatorial Guinea and neighbouring countries.

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

- In week week 14 (ending 9 April 2023), overall, there were decreasing or stable trends observed in most of the EU/EEA indicators. Among the countries reporting increases in any indicator compared to the previous week, values of indicators remain low to moderate: cases among 65+ years below 10%, hospital indicators below 20%, ICU indicators below 7%, and deaths below 7%.
- The estimated distribution of variants of concern (VOC) or of interest (VOI) during weeks 12-13 was 58.0% (54.1–81.6% from six countries) for XBB.1.5, 22.6% (1.7–28.4% from six countries) for XBB, 10.1% (4.5–20.4% from six countries) for BA.2.75, 6.0% (4.0–9.4% from six countries) for BQ.1, 0.5% (0.3–1.8%, 45 detections from five countries) for BA.5, and 0.2% (0.1–1.4%, 23 detections from five countries) for BA.2.

**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.
- Following a peak at week 51/2022 with 39% positivity, influenza activity had been decreasing across the Region until week 4/2023 when it reached 22% positivity before rising again to fluctuate around 25% positivity between weeks 6 and 11/2023 before decreasing again to 15% positivity for week 14/2023.
- Overall this season, influenza A(H3) viruses have dominated in sentinel primary care specimens, however higher circulation of A(H1)pdm09 and type B viruses was observed starting from week 50/2022 and week 2/2023, respectively. A similar prevalence of A(H1)pdm09 and A(H3) viruses was detected in non-sentinel specimens.
- Both influenza type A and type B viruses have been detected in hospitalized patients in ICU and other wards and influenza A(H1)pdm09 viruses have dominated among SARI patients.
- Virus type and subtype prevalence by country and surveillance system has been variable across the season.

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

- Since the previous update on 28 February 2023, and as of 11 April 2023, no new MERS-CoV cases and no related deaths have been reported by health authorities worldwide or by the World Health Organization (WHO).
- Since the beginning of 2023, and as of 11 April 2023, no MERS-CoV cases have been reported with date of onset in 2023 by health authorities worldwide or by the WHO.

**Measles - Multi-country (World) - Monitoring European outbreaks**

- Measles activity continues to be low in the EU/EEA.
- The outbreak in Austria continues with 108 cases reported as of week 15, 2023.
- In February 2023, a total of 41 confirmed cases of measles were reported to TESSy by eight EU/EEA countries. Overall, there are 57 cases reported in the EU/EEA in 2023.
- On a global scale, cases and outbreaks have been reported in Armenia and Ukraine and are being reported in different WHO Regions (AFRO, PAHO), including the Democratic Republic of the Congo, South Africa, and the United States.

**Monthly diphtheria epidemiological monitoring in the EU/EEA - 2023**

- In 2023, and as of 4 April, 20 diphtheria cases were reported in the EU/EEA through The European Surveillance System (TESSy). Cases were reported in Germany (17), Czechia (2), and Norway (1).
- ECDC has no data indicating community transmission and outbreaks of *Corynebacterium (C.) diphtheriae* in the broader EU/EEA population resulting from the increased number of diphtheria cases observed since the second half of 2022.
- An unusually broad predicted resistance of *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.

**Diphtheria - Nigeria - 2023**

- The Nigeria Centre for Disease Control and Prevention reported that until week 9 2023 (NCDC Diphtheria Situation Report 3), 1 064 suspected diphtheria cases were reported of which 389 were confirmed (36.6%) including 62 deaths.
- ECDC is monitoring the event through epidemic intelligence activities.

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

### Overview:

**Update:** On 4 April 2023, the [Canadian Food Inspection Agency](#) reported a case of A(H5N1) infection in a domestic dog in Oshawa, Ontario. The dog died with respiratory system involvement after chewing on a wild goose.

In addition, five domesticated cats were reported from the US with A(H5N1) infection, all of which died due to severe symptoms following a likely exposure to wild birds. One cat was reported in [Wyoming](#) on 6 April 2023, and four cats with symptoms and death in January 2023 were reported retrospectively in [Nebraska](#) and [Oregon](#). Previously, a cat with A(H5N1) infection had been reported in [France](#) in December 2022.

### Summary:

Globally, as of 30 March 2023, there have been 874 human cases, including 458 deaths (case-fatality rate: 52.4%), of human infection with avian influenza A(H5N1) reported in 23 countries since 2004. To date, no human-to-human transmission has been detected.

**Sources:** [ECDC Avian influenza](#), [ECDC Avian influenza overview: Latest situation update of the avian influenza in EU/EEA](#), [the Ministry of Health of Chile](#), [WHO PAHO briefing](#)

### ECDC assessment:

A few cats and dogs have been found to be infected recently after direct exposure to infected wild birds. No human infection related to the cats and dogs has been identified to date. The level of information about the incidences is limited and further information is required to assess the likelihood of transmission through pets. Pet owners should be vigilant and in general keep pets away from sick and dead wild birds and other wild animals such as foxes. If avian influenza virus detections are reported in close proximity, dogs should be kept on leashes and cats indoors if possible. When pets are in direct contact with potentially infected dead or sick birds, pet owners should closely monitor animals for respiratory but possibly also other symptoms and consult a veterinarian to consider testing for avian influenza viruses.

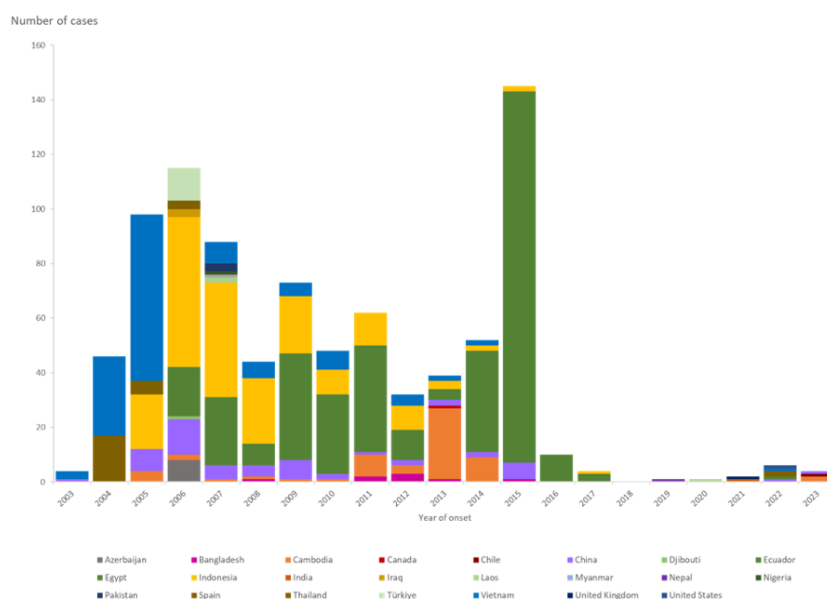
Sporadic human cases of different avian influenza A(H5Nx) subtypes have previously been reported globally. Current epidemiological and virological evidence suggests that A(H5N1) viruses remain avian-like. Transmission to humans remains a rare event and no sustained transmission between humans has been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

Overall, the risk of zoonotic influenza transmission to the general public in EU/EEA countries is considered to be low. The risk to occupationally exposed groups such as cullers has been assessed as 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 and dead backyard poultry underline the risk associated with unprotected contacts with infected birds in backyard farm settings and suggests the appropriate use of 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. ECDC, together with EFSA and the EU reference laboratory for avian influenza, produces a quarterly updated report of the [avian influenza situation](#). The most recent report was published in March 2023.

**Figure 1. Distribution of confirmed human cases of avian influenza A(H5N1) virus infection by year of onset and country, 2003–2023 (updated on 30 March 2023, n=874)**



*Note: includes two asymptomatic cases reported in 2022 from Spain with suspected environmental contamination (Eurosurveillance, 2023)*

Source: ECDC

### 3. Marburg virus disease – Equatorial Guinea – 2023

#### Overview:

##### Update:

On 11 April 2023, the Ministry of Health of Equatorial Guinea published an [epidemiological report](#) according to which, as of 10 April 2023, one new confirmed case of Marburg virus disease (MVD) has been reported in the country. The individual is deceased and was reported from Bata, Litoral province. Of the total 1 322 contacts, 30% (385) are being followed. Since the beginning of the outbreak, there have been 15 confirmed cases; 11 deaths, three recovered, and one status unknown.

**Summary:** On 8 February 2023, the [Ministry of Health of Equatorial Guinea](#) published an epidemiological alert regarding an unknown disease-causing haemorrhagic fever in two neighbouring communities in the district Nsok Nsomo, in the province of Kié-Ntem. On 13 February 2023, [Equatorial Guinea](#) confirmed the first MVD outbreak in the country. The [index case](#) died in [early January 2023](#) and the Ministry of Health of Equatorial Guinea was notified on 7 February 2023.

According to the [Ministry of Health of Equatorial Guinea](#), as of 10 April 2023 15 MVD cases, including 11 deaths (case fatality rate 73%), had been reported from four districts in four provinces: Ebibeyin, Kie Ntem province (three cases, including two deaths); Evinayong, Centro Sur province (2 cases incl. 2 deaths); Nsork, Wele-Nzas province (one case, including one death); Bata, Litoral province (nine cases, including six deaths). Of the [14 confirmed cases](#) for which information is known, nine are female and five are male, and 42.8% are between 30–44 years. Four of the confirmed cases are health workers, two of whom have died.

On 14 February 2023, during an [emergency meeting of the Marburg virus vaccine consortium \(MARVAC\)](#), the [World Health Organization](#) representative for Equatorial Guinea reported that epidemiological surveillance in the country was increasing, including intensified contact tracing. A 30-day response plan was also being developed to assess the needs and impact of the current situation.

The National Technical Committee of Health Emergencies is [working](#) closely with the Ministry of Health and Social welfare to coordinate and strengthen disease control and prevention. [WHO](#) and its [partners](#) are supporting Equatorial Guinea and [neighbouring countries](#).

**Marburg virus disease** (MVD), formerly known as Marburg haemorrhagic fever, is a severe disease in humans caused by *Marburg marburgvirus* (MARV), with a case **fatality ratio of up to 88%**. Although MVD is uncommon, MARV has the potential to cause epidemics with significant case fatality rates. All recorded MVD outbreaks have originated in Africa.

Since 1967, when MVD was first detected, approximately **600 MVD cases** have been reported in outbreaks in Angola, the Democratic Republic of the Congo, Ghana, Guinea, Equatorial Guinea, Kenya, South Africa, Tanzania, and Uganda.

Please refer to ECDC's [factsheet](#) about MVD for additional information.

#### **ECDC assessment:**

This is the first MVD outbreak to occur in Equatorial Guinea.

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

The most likely route of introduction of MARV 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 the spread of the virus within the EU/EEA is considered to be very low.

Direct contact with blood and other body fluids of infected people or indirect contact with contaminated surfaces and materials like clothing, bedding, and medical equipment should be avoided. Furthermore, habitats that may be populated by bats, such as caves or mines in areas where MVD has been reported, as well as any form of close contact with wild animals, including monkeys, forest antelopes, rodents, and bats, both alive and dead, and the manipulation or consumption of any type of bushmeat should be avoided.

#### **Actions:**

ECDC is monitoring this event through its epidemic intelligence activities and will report when relevant information is available.

ECDC is in contact with partners.

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

#### **Overview:**

##### **Summary:**

At the pooled EU/EEA level, the epidemiological picture over the past 12 months since the initial large Omicron peak has been characterised by periodic waves of infection, approximately every 2–3 months. There has been a general downward trend in the height of the associated peaks in reported cases, hospitalisations, ICU admissions, and deaths in this period.

By the end of week 14 (ending 9 April 2023), overall there were decreasing or stable trends observed in most EU/EEA indicators based on pooled country data. An increase was observed in hospital occupancy (15%), which remains at low levels compared with the pandemic maximum as well as the maximum observed in recent peaks. The pooled COVID-19 death rate decreased compared to the previous week, with 632 deaths reported from 25 countries.

There is some variation across the EU/EEA with some countries reporting increasing trends. Among the countries reporting increases in any indicator compared to the previous week, values of indicators remain low to moderate (cases among 65+ years below 10%, hospital indicators below 20%, ICU indicators below 7%, and deaths below 7%) relative to the maximum reported during the pandemic.

The following country-level trends were observed:

- Case rates among people aged 65 years and above, increased in one (France) out of 26 countries with reported data. This trend has continued for the past five weeks in France.
- Three (Ireland, France, and Greece) out of 13 countries reporting data reported increases in the last week in at least one hospital or ICU indicator.
- One country (Latvia) reported increases in overall COVID-19 deaths in the last two weeks. Increases in death rates in the age groups 65–79 years and 80 years and above were reported by one (Romania) and four (Croatia, Estonia, Latvia, and Malta) of the 23 countries with age-specific data, respectively.

The cumulative uptake of a first booster was 65.4% (country range: 11.3–87.1%) among adults aged 18 years and above, 84.9% (country range: 13.3–100.0%) among people aged 60 years and above, and 54.7% (country range: 9.2–75.8%) in the total population. The cumulative uptake of a second booster was 17.3% (country range: 0.2–42.0%) among adults aged 18 years and above, 35.5% (country range: 0.4–86.7%) among people aged 60 years and above, and 14.2% (country range: 0.2–33.6%) in the total population.

Among the six countries with an adequate volume of sequencing or genotyping for weeks 12–13 (20 March to 2 April 2023), the estimated distribution of variants of concern (VOC) or of interest (VOI) was 58.0% (54.1–81.6% from six countries) for XBB.1.5, 22.6% (1.7–28.4% from six countries) for XBB, 10.1% (4.5–20.4% from six countries) for BA.2.75, 6.0% (4.0–9.4% from six countries) for BQ.1, 0.5% (0.3–1.8%, 45 detections from five countries) for BA.5, and 0.2% (0.1–1.4%, 23 detections from five countries) for BA.2.

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 5 April 2023, and as of 14 April 2023, no changes have been made to ECDC variant classifications for variants of concern (VOC), variants of interest (VOI), variants under monitoring or deescalated variants.

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

#### **Public Health Emergency of International Concern (PHEIC):**

On 30 January 2020, the World Health Organization (WHO) declared that the outbreak of COVID-19 constituted 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 the 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:**

SARS-CoV-2 continues to circulate in EU/EEA with varying intensity. The epidemiological picture in the EU/EEA over the past 12 months has been characterised by periodic waves of infection, approximately every 2–3 months, with an overall downward trend in the height of the associated peaks in reported cases, hospitalisations, ICU admissions, and deaths in this period. Emergence of new variants of concern or waning of population immunity over time may impact the future epidemiological situation.

For the most recent risk assessment, please visit [ECDC's dedicated webpage](#).

#### **Actions:**

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](#).

For EU/EEA and country-specific epidemiological trends and forecasts, visit our [Country Overview Report](#) (updated Fridays). In addition to actions described in our latest [COVID-19 risk assessments](#), on 05 April 2023 ECDC published [Interim public health considerations for COVID-19 vaccination roll-out during 2023](#) to support countries with vaccination strategy decision-making. This guidance aims to offer advice on the optimal timing and targeting of vaccination campaigns in order to limit the continued burden of disease experienced by the elderly and those



with comorbidities. It complements the [Long-term qualitative scenarios](#) guidance published in August 2022 to support country preparedness activities in the post-acute phase of the COVID-19 pandemic.

## 5. Influenza – Multi-country – Monitoring 2022/2023 season

### Overview:

#### Week 14/2023 (03 April–09 April 2023)

- The percentage of all sentinel primary care specimens from patients presenting with ILI or ARI symptoms that tested positive for an influenza virus decreased to 15% in week 14/2023 from 16% in the previous week and remaining above the epidemic threshold (10%).
- 11 of 42 countries or areas reported medium intensity and 16 of 41 countries reported widespread activity across the Region.
- Of the 29 countries that reported sentinel primary care specimen influenza virus positivity above the 10% epidemic threshold, only Estonia and Slovakia reported activity above 40%.
- Influenza type A and type B viruses were detected in sentinel and non-sentinel surveillance, with influenza type B predominating in both systems.
- Hospitalized patients with confirmed influenza virus infection were reported from ICU (with higher proportions of type B viruses) and SARI surveillance (with higher proportions of type B viruses). Four countries or areas reported influenza virus positivity rates above 10% in SARI surveillance (Lithuania, Albania, Serbia and Ukraine).

Source: [Flu News Europe](#)

### ECDC assessment:

Following a peak at week 51/2022 with 39% positivity, influenza activity had been decreasing across the Region until week 4/2023 when it reached 22% positivity before rising again to fluctuate around 25% positivity between weeks 6 and 11/2023 before decreasing again to 15% positivity for week 14/2023.

### 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 28 February 2023, and as of 11 April 2023, no new MERS-CoV cases and no related deaths have been reported by health authorities worldwide or by the World Health Organization (WHO).

**Summary:** Since the beginning of 2023, and as of 11 April 2023, no MERS-CoV cases have been reported with date of onset in 2023 by health authorities worldwide or by the WHO.

Since April 2012, and as of 11 April 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.

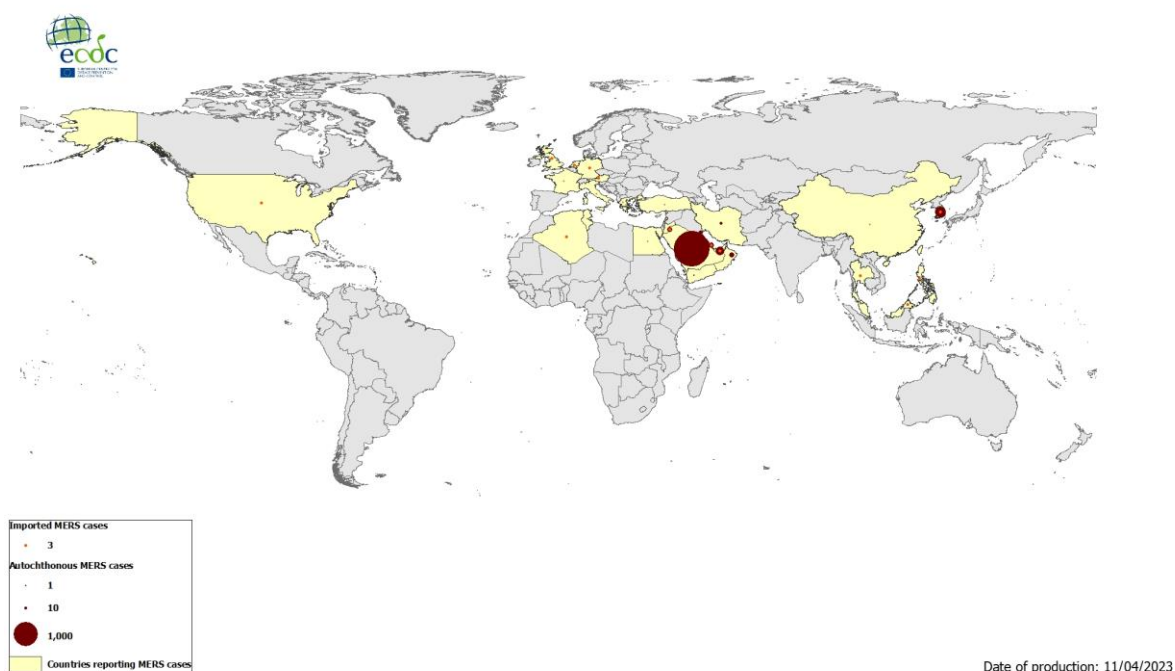
ECDC published a technical report, [Health emergency preparedness for imported cases of high-consequence infectious diseases](#), in October 2019, which will be useful for EU Member States wanting to assess their level of preparedness for a disease such as MERS-CoV. ECDC also published [Risk assessment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

#### Actions:

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

**Last time this event was included in the CDTR:** [4/14/2023](#)

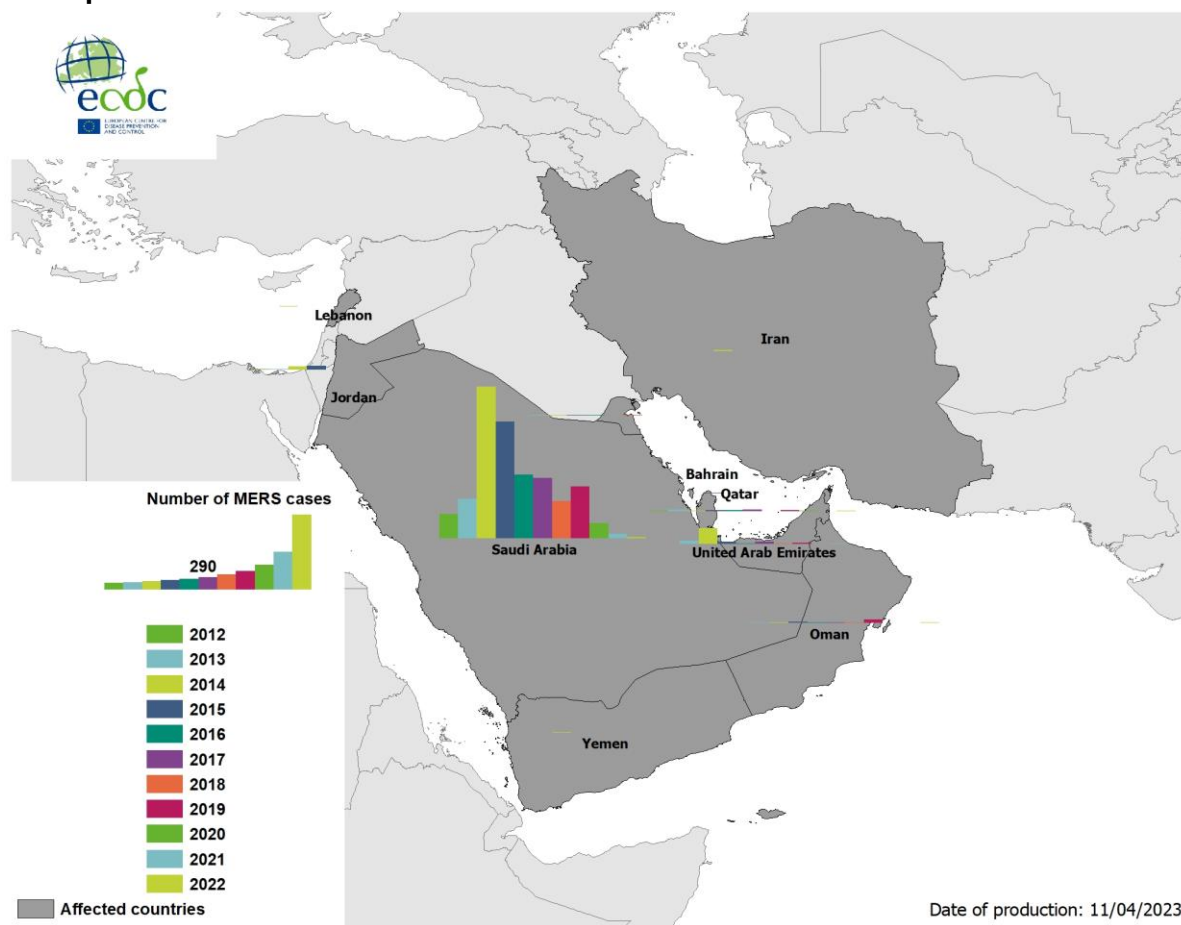
**Figure 2. Geographical distribution of confirmed cases of MERS-CoV by reporting country, April 2012 - March 2023**



Source: ECDC



**Figure 3. Geographical distribution of confirmed MERS-CoV cases by country of infection and year, from April 2012 to March 2023**



Source: ECDC

## 7. Measles – Multi-country (World) – Monitoring European outbreaks

### Overview:

In February 2023, eight EU/EEA countries reported 41 confirmed cases of measles to The European Surveillance System (TESSy) (detailed data available in [ECDC's Surveillance Atlas of Infectious Diseases](#)). The most recent cases in February 2023 were reported in Austria (31), Estonia (1), France (1), Germany (1), Italy (1), Poland (1), Slovakia (1), and Spain (4). Overall, 57 cases have been reported in January and February in the EU/EEA. Measles activity remains low.

As of 12 April 2023, complementary epidemic intelligence surveillance of official public and media sources has detected one measles outbreak in the EU/EEA (Austria). Seven EU/EEA countries have reported 48 new suspected and/or confirmed cases of measles in the past month: Austria (19), Denmark (1), Estonia (1), Germany (13), Poland (11), Spain (2), and Sweden (1). Other countries did not report new cases of measles or did not provide updates for previous periods.

No measles-related deaths have been reported in the EU/EEA in 2023 to date, based on TESSy and epidemic intelligence data.

Relevant updates outside the EU/EEA are available for Armenia and Ukraine, as well as the WHO Regional Office for Africa (WHO AFRO), including updates for the Democratic Republic of the Congo (DRC) and South Africa, and the WHO Pan American Health Organization (PAHO). No updates were available for the WHO Regional Office for Europe (WHO EURO), the WHO Regional Office for Eastern Mediterranean (EMRO), the WHO Regional Office for South-East Asia (SEARO), or the WHO Western Pacific Regional Office (WPRO).

**Disclaimer:** The [monthly measles 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. This report is a supplement to [ECDC's monthly measles and rubella monitoring report](#), based on data routinely submitted by 29 EU/EEA countries to TESSy. Data presented in the two monthly reports may differ.

**Epidemiological summary for EU/EEA countries with epidemic intelligence updates since last month**

[Austria](#) reported 108 cases of measles, based on data as of 11 April 2023, the majority of which are related to an outbreak. This is an increase of 19 cases compared to the national report from 21 March. The outbreak is mainly localised in the Styria region, where 99 of 108 cases were reported as of week 15 (ending 16 April 2023) and the first case was reported in week 4 2023. Cases have also been reported from other regions: Upper Austria (5), Vienna (3), and Carinthia (1). Most of the cases (80 of 108) were reported between weeks 7 and 11.

[Denmark](#) reported one case of measles in March 2023. No cases were reported in 2021 or 2022. Four cases were reported in 2020.

[Estonia](#) reported one case in February 2023. No cases were reported in Estonia between 2020 and 2022.

[Germany](#) reported 29 suspected and confirmed cases as of week 14 2023 (ending 9 April 2023), an increase of 13 cases since week 9 2023 (ending 5 March 2023). (Note: the number provided in this report includes suspected cases and is therefore higher than the number provided to TESSy).

[Poland](#) reported 11 cases between January and March 2023, according to its bi-weekly national report.

[Spain](#) reported two cases, one of which is imported, according to data for 26 March 2023 (Bulletin number 13).

[Sweden](#) reported one imported case in 2023 in Södermanland region as of 11 April 2023.

**Relevant epidemiological summary for countries outside the EU/EEA**

Armenia reported 85 cases of measles according to [media, quoting the Ministry of Health](#) on 29 March 2023.

[Ukraine](#) reported three cases in January to February 2023.

According to the WHO Regional office for Africa ([WHO AFRO](#)) report, as of 26 March (week 13) cases and outbreaks of measles in 2023 were reported in the following countries: Cameroon, Chad, Ethiopia, Ghana, Guinea, Kenya, Liberia, Mali, Niger, Senegal, Sierra Leone, South Sudan, Tanzania, Uganda, and Zambia. The DRC reported 40 650 suspected cases, including 465 deaths from January to March 2023. An outbreak of measles has been declared in all provinces of [South Africa](#) except for the Eastern province. There are 900 cases reported, the vast majority of which (86%) are children aged one to 14 years. Genotype D8 similar to the strain detected in Zimbabwe in the 2022 outbreak was detected in Limpopo and the North-west province.

Due to varying reporting periods by the countries, please visit the latest available weekly bulletin.

According to the WHO Pan American Health Organization ([PAHO](#)) report in 1-12 week 2023, ending 25 March 2023, three cases were reported in the United States.

**ECDC assessment:**

The substantial decline in measles cases reported by EU/EEA countries after March 2020, which has continued through 2022 and into 2023, contrasts with the usual annual and seasonal pattern for measles, which peaks during the spring in temperate climates. A similar decrease has been observed in other countries worldwide during the same period. Under-reporting, under-diagnosis, or a real decrease due to the direct or indirect effects of the COVID-19 pandemic measures can explain the observed decline in cases. Active measles surveillance and public health measures, including high vaccination uptake, provide the foundation for a proper response to possible increases in the number of cases/outbreaks.

**Actions:**

ECDC is monitoring the measles situation through its epidemic intelligence activities, which supplement monthly outputs with measles surveillance data from The European Surveillance System (TESSy), routinely submitted by 29 EU/EEA countries. ECDC published a risk assessment entitled '[Who is at risk for measles in the EU/EEA?](#)' on 28 May 2019.

## 8. Monthly diphtheria epidemiological monitoring in the EU/EEA – 2023

### Overview:

**Summary:** In 2023, and as of 4 April, 20 diphtheria cases were reported in the EU/EEA through The European Surveillance System (TESSy). Cases were reported in Germany (17), Czechia (2), and Norway (1).

This represents an increase of six cases since the previous update with data as of 1 March 2023. These six new cases have been reported in Germany (6).

Among all cases reported in 2023, 14 cases were caused by *Corynebacterium (C.) diphtheriae* and the remaining six cases were caused by *Corynebacterium (C.) ulcerans*. Nineteen of the 20 cases had a cutaneous clinical presentation (Germany (17), Czechia (1), and Norway (1)), and one case was classified as other clinical presentation. None of the cases reported in 2023 had a respiratory clinical presentation. In 2023, and as of 4 April, no fatal cases have been reported in the EU/EEA.

Among these 20 diphtheria cases reported in TESSy, four cases were classified as imported cases, from Afghanistan (2), Syria (1), and the Philippines (1), four cases were not imported, and for 12 cases the importation status was unknown.

ECDC has no information indicating community transmission or outbreaks of diphtheria in the broader EU/EEA population resulting from the increased number of diphtheria cases observed since the second half of 2022.

**Other news:** From 2 January to 26 March 2023, the [UK Health Security Agency](#) reported one confirmed case of diphtheria among asylum-seekers in England.

From 1 January to 3 April 2023, [Switzerland's Federal Office of Public Health](#) reported five confirmed cases of diphtheria in the country.

**Disclaimer:** *The monthly diphtheria epidemiological monitoring [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 4 April, 20 diphtheria cases were reported in the EU/EEA through TESSy. Cases were reported in Germany (17), Czechia (2), and Norway (1).

In 2022, 177 diphtheria cases attributable to *C. diphtheriae* in the EU/EEA were reported to TESSy. In the same period, 31 diphtheria cases and one death attributable to *C. Ulcerans* in the EU/EEA were reported to TESSy.

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 Communicable Disease Threats Report (CDTR) on a monthly basis.

### 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 in migrant population 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 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.

Different recent scientific communications 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 before assessing 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 ongoing developments ECDC recommends as a precautionary measure that antimicrobial susceptibility testing is performed on all *C. diphtheriae* isolates.

**Actions:**

ECDC continues to monitor the diphtheria epidemiological situation in Europe and will provide monthly updates. The latest information available can be found on [EpiPulse](#), the [Surveillance Atlas of Infectious Diseases](#), and [ECDC's CDTR](#).

## 9. Diphtheria – Nigeria – 2023

**Overview:**

Since 1 December 2022, the Nigeria Centre for Disease Control and Prevention has been responding to diphtheria outbreaks reported in Kano and Lagos states ([NCDC Diphtheria Situation Report 1](#)). According to the most recent situation report using data between week 19 2022 and until week 9 2023 ([NCDC Diphtheria Situation Report 3](#)), 1 064 suspected cases were reported, of which 389 were confirmed (36.6%), 322 discarded, 201 are pending classification, and 152 are unknown from 21 states.

Of the 389 confirmed cases, 305 (78.4%) were in 2–14-year-olds and 60 (15.4%) were fully vaccinated. Sixty-two deaths were reported among the 389 confirmed cases (case fatality rate 15.9%). Most of the cases have been reported from Kano (79% of the suspected and 97% of the confirmed) ([NCDC Diphtheria Situation Report 3](#)).

NCDC is coordinating the response activities, which include rapid response teams deployed in the field, harmonising surveillance cross states and laboratories, and the distribution of diphtheria antitoxin vials to Kano State. A detailed list of response activities is available in the [NCDC Diphtheria Situation Report 2](#).

**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 risk of diphtheria importation from Nigeria to Europe is low, however cannot be excluded. Europeans living or travelling to the areas affected by these outbreaks should consult their healthcare provider regarding their vaccination status and assess the convenience of receiving a diphtheria toxoid booster dose according to the national guidelines.

Upon return to the EU/EEA, travellers with symptoms, such as tonsillitis, pharyngitis, erosanguinous nasal discharge, or skin lesions, should seek healthcare for diphtheria testing. Clinical management of confirmed cases, including the use of DAT, should be undertaken according to national guidelines. These cases should be reported following national recommendations and to TESSy as defined [per protocol](#). Rapid public health investigation and management of close contacts should also be implemented.

**Actions:**

ECDC is monitoring this event through its epidemic intelligence activities.