

## WEEKLY BULLETIN

# Communicable Disease Threats Report

Week 2, 7 - 13 January 2024

## This week's topics

1. Overview of respiratory virus epidemiology in the EU/EEA
2. SARS-CoV-2 variant classification
3. Measles – Multi-country (World) – Monitoring European outbreaks
4. Monthly diphtheria epidemiological monitoring in the EU/EEA - 2023
5. Middle East respiratory syndrome coronavirus (MERS-CoV) - Multi-country
6. Poliomyelitis – Multi-country (World) – Monitoring global outbreaks

## Executive summary

### Overview of respiratory virus epidemiology in the EU/EEA

- By the end of week 1 (ending 7 January 2024), rates of respiratory illness (influenza-like illness (ILI) and/or acute respiratory infection (ARI)) in the community continue to increase in most EU/EEA countries. Rates of severe acute respiratory infection (SARI) cases presenting to secondary care due to seasonal influenza were at a level comparable to the same time last year and are now notably increasing in four of the seven reporting countries.
- Consultation rates of patients presenting to general practitioners with respiratory illness (ILI and/or ARI) increased and since week 1, 2024, the majority of EU/EEA countries report activity above baseline. Seasonal influenza is circulating at higher levels than SARS-CoV-2 and respiratory syncytial virus (RSV), which are both declining in activity. Of 24 countries reporting testing for influenza, 17 reported seasonal influenza activity above the 10% positivity threshold in sentinel primary care in week 1. Concurrently, an increasing number of countries reported the geographical spread as widespread, indicating that influenza activity is intensifying. Influenza median test positivity has continued to increase to 26% (pooled country data: 28%) in week 1. Influenza activity began later in 2023–2024 than in 2022–2023. Countries report a mix of increasing and decreasing trends in SARS-CoV-2 activity and COVID-19 hospitalisations, ICU admissions and deaths, with severe outcomes predominantly among those aged 65 years and above. For RSV, countries continue to report a mix of increasing and decreasing trends for activity and severity indicators. The highest impact of RSV

continues to be among children aged 0–4 years. Due to decreased testing and reporting during the holiday period, data for week 51 in 2023 to week 1 in 2024 must be interpreted with caution.

### SARS-CoV-2 variant classification

- ECDC classified **BA.2.86** as a variant of interest (VOI) on 24 November 2023. As of 8 January 2024, BA.2.86 is the dominating lineage in EU/EEA countries and continues to increase rapidly, with a median proportion for week 51 (18 December 2023 to 24 December 2023) of 75.6% (range:41.7-91.2%).
- 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 likely driver of the success of BA.2.86-descendant lineages is immune escape in a population where immunity is increasingly derived from XBB-variants.
- **XBB.1.5-like+F456L** lineages are circulating with a median proportion of 20% in EU/EEA countries (range: 7.4–47.2%). The overall proportion of XBB.1.5-like+F456L variants appears to be declining in the EU/EEA.
- **XBB.1.5-like+L455F+F456L** variants have been on a declining trend in the EU/EEA, with a median proportion of 11.9% (range: 4.6–44.4%). The lineages present in this umbrella are mainly HK.3, JD.1.1 and JG.3.
- Other **XBB.1.5-like** lineages are circulating in very low proportions and are declining in the EU/EEA, with a median proportion of 1.0% (range: 0.0-24.6%).
- **BA.2.75** is not detected in the EU/EEA since the median proportion is 0.0% (range: 0–0.0%).

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

- In November 2023, 429 cases of measles were reported by twelve countries. Between January and November 2023, 2 242 cases of measles were reported in The European Surveillance System (TESSy) by 22 countries.
- Through epidemic intelligence, we identified 954 new measles cases in six EU/EEA countries since the last monthly update, including reports on an ongoing outbreak in Romania.
- Three measles-related deaths have been reported in Romania, two in children less than one year of age, and one in an adult with underlying condition.
- Overall, measles transmission currently remains low in the EU/EEA.
- Relevant updates for outside the EU/EEA are available for Switzerland, England, UK, Ukraine, and the WHO Regions: AFRO, PAHO, EMRO, and SEARO (no update for WHO regions EUROPE and WPRO).

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

- In 2023, and as of 8 January 2024, 157 cases of diphtheria have been reported in the EU/EEA through The European Surveillance System (TESSy). Cases were reported in Germany (107), the Netherlands (14), Belgium (12), Czechia (7), Slovenia (4), Latvia (3), Norway (3), Sweden (3), Luxembourg (2), Slovakia (1) and Spain (1). This represents 26 additional cases since the previous update on 12 December 2023.
- Among the 157 cases reported, 14 presented with respiratory disease, 136 with cutaneous disease, and two with respiratory and cutaneous disease. For two cases, the clinical presentation was reported as unknown.
- Three of the cases died, one in Belgium, one in Germany and one in Latvia.
- Since September 2022, and as of 8 January 2024, there have been 424 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.

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

- Since the previous update on 6 December 2023, no new MERS-CoV cases have been reported by WHO or national health authorities.
- Since the beginning of 2023, and as of 10 January 2024, two MERS-CoV cases were by the United Arab Emirates (1) and Saudi Arabia (1), with date of onset in 2023.

### Poliomyelitis – Multi-country (World) – Monitoring global outbreaks

- In 2023, and as of 10 January 2024, one new case of acute flaccid paralysis (AFP) caused by wild poliovirus type 1 (WPV1) was reported from Pakistan (1).

- In 2023, and as of 10 January 2024, 15 new cases caused by circulating vaccine-derived poliovirus type 1 (cVDPV1) were reported from the Democratic Republic of the Congo (DRC) (14) and Madagascar (1). In 2022, an additional five cases were reported from DRC (5).
- In 2023, and as of 10 January 2024, 67 new cases of AFP caused by cVDPV2 were reported from 11 countries, including four new countries: Chad (6), the DRC (9), Guinea (21), Indonesia (2), Mali (3), Mauritania (1)(new), Mozambique (1)(new), Niger (1)(new), Nigeria (21), South Sudan (1) (new), Tanzania (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 20 EU/EEA countries up to week 1. Moving epidemic method (MEM) thresholds were available for eight countries for ARI and 17 countries for ILI. Most EU/EEA countries report activity above baseline in at least one indicator: for ARI, three reported low activity and while four country reported baseline; for ILI, seven countries reported low activity, three medium, one high and one country reported very high activity while five reported baseline activity. This indicates an increase in acute respiratory infections presenting in primary care in EU/EEA countries.
- Among countries reporting data on testing in primary care sentinel settings for seasonal influenza, RSV or SARS-CoV-2, the median test positivity at the EU/EEA level was highest for influenza at 26% (pooled country data: 28%; IQR of country values: 18–33%). However, the number of tests for all three pathogens was low during week 1, which is not unusual for the holiday period when testing and reporting historically decrease at the national level. Seventeen countries reported seasonal influenza activity above the 10% positivity threshold in sentinel primary care. Concurrently, the qualitative indicators reported for seasonal influenza confirm increased influenza activity and geographic spread in the EU/EEA. Of 21 countries reporting qualitative assessments of seasonal influenza activity, 20 countries reported levels above baseline (low: eleven countries; medium: five countries; and high: four countries). Of 22 countries reporting on geographical spread of seasonal influenza, all reported some level of activity (sporadic: three countries; local: three countries; regional: two countries and widespread: 14 countries). Seasonal influenza detections in data from non-sentinel sites continued to increase in week 52. Detections from non-sentinel sites decreased in week 1, which is most likely attributable to a decrease in testing over the holiday period.
- Among the 593 sentinel primary care detections of seasonal influenza, 529 (89%) were typed as influenza virus type A, 12 were typed as influenza virus type B (2%) and the remaining 52 (9%) influenza viruses remained untyped. Of the influenza type A detections, 414 (78%) were further subtyped as either A(H1)pdm09 (n=334, 81%) or A(H3) (n=80, 19%). Four of the influenza type B detections were further lineage defined as B/Victoria lineage.
- Fourteen countries reported sentinel primary care data for SARS-CoV-2, with a median test positivity of 11% (pooled country data: 10%; IQR of country values: 9–13%). Following a continuous increase in the overall median SARS-CoV-2 positivity from week 44 to week 49, decreases have been observed since week 50. Both increasing and decreasing trends for SARS-CoV-2 test positivity were observed at the national level up to week 1, 2024. SARS-CoV-2 detections and testing in non-sentinel data were similar to those reported for sentinel data, with most countries reporting decreasing trends. However, in some countries, SARS-CoV-2 positivity and detections in non-sentinel data are notably increasing, especially in those aged 65 years and above.
- RSV detections in sentinel primary care were reported by 11 countries and median test positivity increased to 6%, while the pooled value further decreased (pooled: 8%; IQR: 2–8%) in week 1. This is most likely attributable to a substantial decrease in testing and reporting over the holiday period. RSV detections in non-sentinel data were reported by 19 countries in week 1 and showed an overall decreasing trend. Both increasing and decreasing trends for RSV detections were observed at the national level during the past weeks.

### Severe disease

- Based on syndromic sentinel secondary care data, rates of severe acute respiratory infection (SARI) cases continue to show an increasing trend in four of the five countries reporting data. Reported rates remain comparable to the same time last year. Some reporting delays are observed and therefore the data need to be interpreted with caution for the last two to three weeks.

- Pooled test positivity for seasonal influenza for SARI cases increased to 41% in week 1, 2024 with positive detections reported from four of the five reporting countries. However, the number of tests was low compared with previous weeks. Increases were observed in all age groups, but positivity was highest in those aged 5-14 years with a pooled test positivity of 71%. An increasing trend in seasonal influenza detections in both non-sentinel hospital and ICU admissions was observed, with the majority of infections being typed as influenza A. Deaths due to seasonal influenza remained low with a slight increasing trend.
- RSV tests among SARI cases were reported by four of five countries in week 1, with a pooled test positivity of 16% and a low number of tests in week 1/2024. The highest test positivity was observed in the 0–4 years age group (pooled test positivity: 53%) and the second highest test positivity was in the 65 years and above age group (pooled test positivity: 12%). Non-sentinel RSV hospital admissions continued to show a decreasing trend since week 49, 2023.
- Pooled SARS-CoV-2 test positivity in SARI cases continued to decrease in recent weeks (13% for week 01), along with a lower number of tests reported for week 1, with a mixed picture at the national level. Overall, non-sentinel hospital admissions, ICU rates and death rates gradually increased from week 36, especially in the age group 65 years and above, to week 50. However, countries report a mix of increasing and decreasing trends even if overall rates have decreased over the past three weeks.
- [EuroMOMO](#) pooled estimates of weekly excess all-cause mortality showed an elevated level of mortality overall and in the age groups above 45 years of age.

## Virus characterization

### Influenza

WHO recommends that trivalent vaccines for use in 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).

During weeks 40/2023–01/2024, 234 A(H1)pdm09, 106 A(H3) and 12 B/Victoria viruses from sentinel and non-sentinel sources were genetically characterised. Of the A(H1)pdm09 viruses, 90 were reported as clade 5a.2a and 144 were subclade 5a.2a.1. Of the A(H3) viruses, two were reported as clade 2a.3a and 104 were subclade 2a.3a.1. All of the 12 B/Victoria viruses were reported as subclade V1A.3a.2.

#### **SARS-CoV-2 variants for weeks 51–52 (25 December 2023 to 7 January 2024)**

The estimated distribution (median and IQR of proportions from 13 countries) of variants of concern (VOCs) or variants of interest (VOIs) was 82% (62–85%) for BA.2.86, 18% (14–21%) for XBB.1.5+F456L, 0.7% (0.0–4.3%) for XBB.1.5-like, and 0% (0–0%) for BA.2.75. The proportion of BA.2.86 continues to grow, with XBB.1.5-like+F456L and XBB.1.5 showing a decreasing trend.

### Period overview (week 25, 2023– week 1, 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 observed since week 50. At the national level, both increasing and decreasing trends were reported for COVID-19 hospitalisations, ICU admissions and deaths. SARS-CoV-2 continues to predominantly impact individuals 65 years and above. Week 50 marked the start of the seasonal influenza epidemic for the current period and activity continues to increase. Test positivity for influenza among SARI cases also increased to above 10% in week 50, with levels comparable to previous years at the start of the seasonal epidemic. Both influenza type A and type B viruses were detected, with a dominance of A(H1)pdm09 viruses in sentinel and non-sentinel virological surveillance data. RSV activity began increasing around week 41, reaching a peak in week 50 and decreasing since then. In recent weeks, a mixed epidemiological picture with increasing and decreasing trends at the national level has been observed. The highest impact of RSV continues to be 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 was circulating at higher levels than SARS-CoV-2 and RSV in week 1, 2024. With continued co-circulation of all three respiratory viruses, it remains essential to continue to monitor the impact on hospital and ICU admissions closely. 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 continued significant pressure on healthcare systems in the

coming weeks. As expected, the holiday period has resulted in decreases in testing and reporting. Consequently, the epidemiological data submitted during weeks 51, 2023–1,2024 must be interpreted with caution.

### 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://eriviss.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](#) which describes the epidemiological situation of acute respiratory infections in the 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: 05 January 2024

## 2. SARS-CoV-2 variant classification

### Overview:

#### Weekly update on SARS-CoV-2 variants:

Since the last update on 15 December 2023 and as of 5 January 2024, **no changes** have been made to ECDC variant classifications for variants of concern (VOCs), variants of interest (VOIs), variants under monitoring and de-escalated variants.

The variant proportions listed below are reported for week 51 (18 December 2023 to 24 December 2023) and as of 8 January 2024.

As of 8 January 2024, **BA.2.86** is the dominating lineage in EU/EEA countries and continues to increase rapidly, with a median proportion for week 51 of 75.6% (range:41.7-91.2%). In addition, the genetic distance between BA.2.86 and other currently circulating variants may have a potential impact on [immunity](#) and [transmissibility](#). Among the 12 EU/EEA countries reporting at least 20 sequences to GISAID EpiCoV for week 51, the proportions of BA.2.86 lineages were as follows: Austria (41.7%), Belgium (75.6%), Denmark (91.2%), Finland (57.1%), France (83.1%), Ireland (75.5%), Italy (61.8%), Netherlands (88.8%), Norway (81.8%), Poland (49.2%), Spain (83.1%) and Sweden (85.2%). This overall increasing trend has been observed for BA.2.86 in recent weeks (Figure 1).

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 variant of interest from the parent lineage BA.2.86. The most likely driver of the success of BA.2.86-descendant lineages is immune escape in a population where immunity is increasingly derived from XBB-variants.

**XBB.1.5-like+F456L** variants currently dominate the global and EU/EEA SARS-CoV-2 variant landscape. As of 8 January 2024 and for week 51, XBB.1.5-like+F456L lineages are circulating with a median proportion of 20.0% in EU/EEA countries (range: 7.4–47.2%). The overall proportion of XBB.1.5-like+F456L variants is declining in the EU/EEA.

**XBB.1.5-like+L455F+F456L** variants have been on a declining trend in the EU/EEA, with a median proportion of 11.9% (range: 4.6–44.4%). The lineages mainly present in this umbrella are HK.3, JD.1.1 and JG.3 lineages. [Preliminary studies](#) indicate that XBB.1.5-like+L455F+F456L variants may bind more efficiently to human ACE-2 and have similar immune evasive properties to XBB.1.5-like+F456L variants and XBB.1.5-like+L455F variants. Virtually all the lineages are already included in the existing VOIs XBB.1.5-like+F456L, but 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 1.0% (range: 0.0-24.6%).

**BA.2.75** is not detected in the EU/EEA since the median proportion is 0.0% (range: 0–0.0%).

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

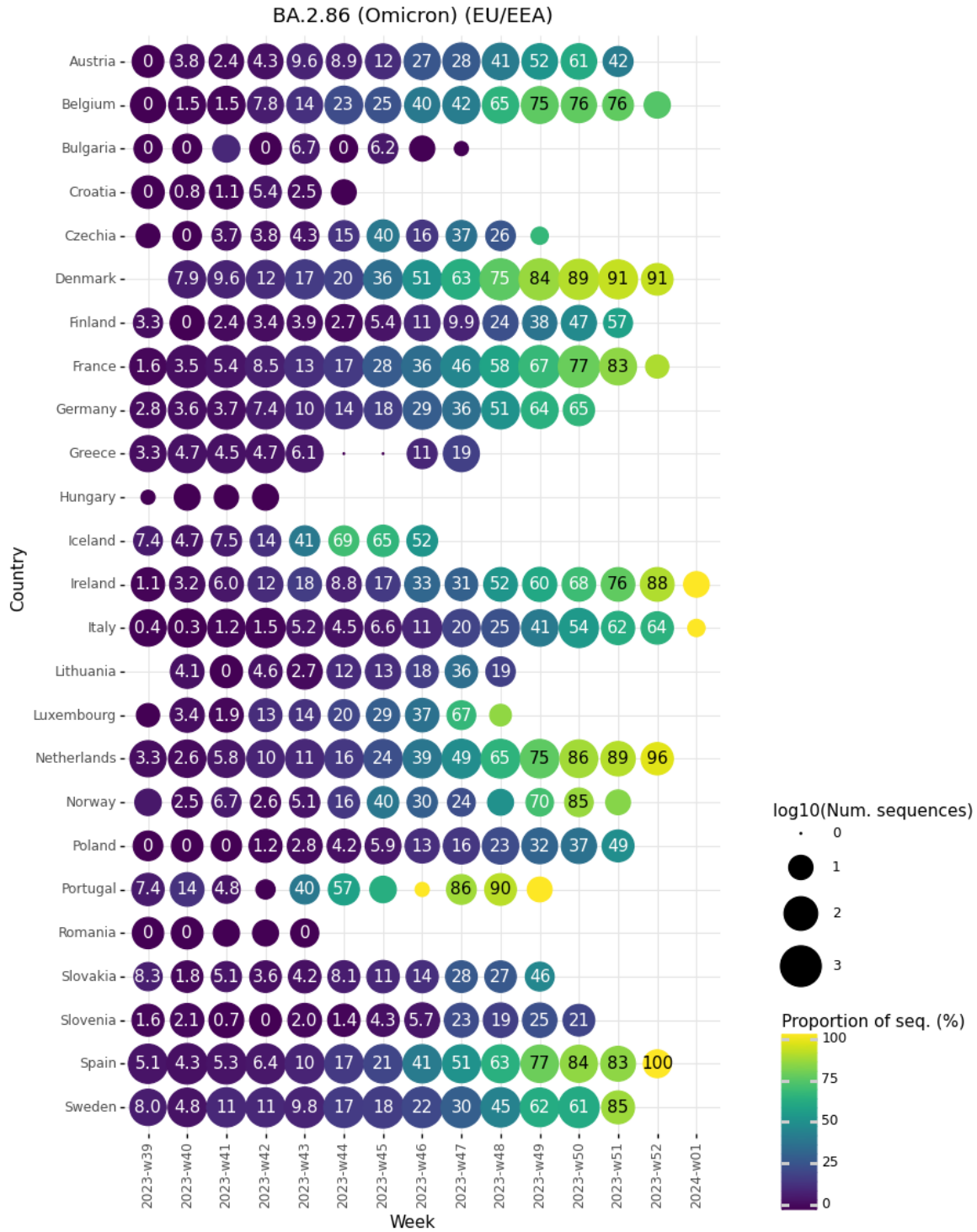
### **Actions:**

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:** 05 January 2024

## Maps and graphs

**Figure 1. Figure 1. Proportion of sequences belonging to BA.2.86 lineages per sample collection week, reported by EU/EEA countries to GISAID EpiCoV as of 8 January 2024**



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

### Overview:

From 1 January to 30 November 2023, a total of 2 242 measles cases have been reported by 22 countries to The European Surveillance System (TESSy), with the majority of cases being reported by Romania (1 687), Austria (172), France (111), Germany (72), Belgium (70), Poland (32), Italy (27), Spain (12) and Sweden (11). The remaining countries with reported cases (Croatia, Denmark, Estonia, Finland, Hungary, Ireland, Latvia, Liechtenstein, Lithuania, the Netherlands, Norway, Portugal, and Slovakia) have reported fewer than 10 cases in 2023. Detailed data are available in [ECDC's Surveillance Atlas of Infectious Diseases](#).

Complementary epidemic intelligence surveillance data collected between 9 and 10 January 2024 from official public and media sources detected 954 new suspected and/or confirmed cases of measles since our last monthly update. These were reported in six EU/EEA countries over the past months: Austria (17), Czechia (1), Denmark (1), Germany (-4 in 2023 and +4 in 2024), Ireland (-1), Poland (3), and Romania (932, including two new deaths). An update on ongoing outbreaks has been reported in Romania. No other countries reported new cases or provided updates for previous periods.

To date and in 2023, three measles-related deaths have been reported in the EU/EEA (Romania).

Relevant updates for outside the EU/EEA are available for Switzerland, England, UK, Ukraine, and the WHO Regions: AFRO, PAHO, EMRO, and SEARO (no update for WHO regions EUROPE and 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 the 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 189 cases of measles in 2023, and as of 1 January 2024, an increase of 17 new cases since 12 December 2023. The recent cases have been reported from Vienna (n=15), and Lower Austria (n=2). Overall, 63 cases have been reported in Vienna where the most recent three cases have been reported in week 1, 2024. Earlier in 2023, an outbreak of measles started in Styria, the most-affected region, with 105 cases reported since the beginning of the outbreak in week 4, 2023 with the majority of cases detected till week 14, 2023. Cases have been reported in almost all regions, except Salzburg and Tyrol regions.

[Czechia](#) reported one case in December 2023 and as of data available on 10 January 2024.

[Denmark](#) has reported nine cases of measles in 2023 (as of data available on 10 January 2024), an increase of one case since 7 November 2023. Of the reported cases, seven were children from one to 14-years-old, one child was less than 1-year-old, and one adult. Half of the cases acquired infection abroad.

[Germany](#) has reported 122 suspected and confirmed cases in 2023 and four cases in week 1, 2024 (data access as of 7 January 2024), a decrease of four cases in 2023 since data access on 13 December 2023.

[Ireland](#) has reported four cases as of week 52 (ending 30 December 2023) in their provisional weekly report, a decrease of one case since the previous monthly CDTR update.

[Poland](#) has reported 36 cases from 1 January to 31 December 2023, an increase of three cases since 30 November 2023.

[Romania](#) is experiencing an ongoing measles outbreak with 2 942 confirmed cases, including three deaths, that have been reported from 1 January 2023 to 7 January 2024, an increase of 932 cases and two deaths since 10 December 2023. Of the three deaths, two were in small children - 7 months of age, not eligible for vaccination, the third death was in a 35-year-old unvaccinated adult who had comorbidities (multiple myeloma). Cases have been reported in 35 counties and the Municipality of Bucharest. The highest incidence is reported in Mureş (148.74 cases per 100 000 pop) and Braşov counties (119.25 cases per 100 000 population). The vast majority of the cases are



in unvaccinated individuals across all age groups (87%), where children from 0 to 9 years of age account for 66.7% of the total cases, including 351 children under one year of age (11.9%). Overall, 187 (6.4%) cases received one dose, and two-dose vaccination was reported in 94 cases (3.2%). Vaccination status was unknown for 95 (3.2%) cases. The highest number of cases was reported in week 49, 2023 – with over 260 cases.

The [Ministry of Health](#) has declared national measles epidemic on 5 December 2023 to facilitate vaccination of children from 9 to 11 months of age and individuals with incomplete vaccination. The Ministry of Health will carry out an information campaign for parents, together with family doctors, for a better adherence to the vaccination program.

According to Ministry of Health, vaccination coverages with the first dose of MMR is 78% at the national level, and 62% for the second dose. The vaccination coverage has been decreasing for the past ten years in Romania.

### Relevant epidemiological summary for countries outside the EU/EEA:

[Switzerland](#) reported 41 cases of measles in 2023 as of 3 January 2024, an increase of one case since December 2023.

[England, UK](#), has reported 167 laboratory confirmed measles cases in England from 1 January to 31 October 2023, an increase of 19 cases in October 2023. Of the reported cases, 60% (n=100) have been in London. At least one case has been reported in all regions. Children under 10 years of age accounted for 57% of the cases and 26% of the cases were in teenagers and young people aged 15 to 34 years. Thirty-three cases (20%) were imported and others were locally acquired.

[Ukraine](#) has reported overall 55 cases as of November 2023 based on the most [recent report](#).

According to the World Health Organization Regional Office for Africa ([WHO AFRO](#)), as of 10 December (week 49, 2023), cases and outbreaks of measles in 2023 were reported in the following countries: Cameroon, Central African Republic, Chad, Democratic Republic of the Congo (DRC), Ethiopia, Kenya, Liberia, Malawi, Mali, Mauritania, Niger, Senegal, South Africa, South Sudan, Uganda, and Zambia. Due to varying reporting periods by the countries please visit the latest available weekly bulletin.

According to the WHO Pan American Health Organization ([WHO PAHO](#)) in 1-52 week 2023 (ending 30 December 2023), 54 cases were reported by three countries: Canada (12), the United States of America (41) and Chile (1).

In the WHO Eastern Mediterranean region ([EMRO](#)) from January to December\* 2023, the overall number of cases in the region is 71 249, reported in all 21 countries. Most of the cases were reported in the following five countries: Yemen (43 675), Pakistan (14 758), Iraq (4 406), Afghanistan (2 127), and Saudi Arabia (1 987). The update is provided from the [WHO Provisional monthly measles and rubella](#) data as of 5 December 2023 (access on 10 January 2024).

\*data are incomplete

In WHO South-East Asia region ([SEARO](#)) from January to December 2023 there were 73 871 cases of measles reported by ten countries: India (61 555), Indonesia (11 037), Nepal (1 013), Bangladesh (139), Thailand (57), Sri Lanka (49), Myanmar (11), Bhutan (6), Maldives (3) and Timor-Leste (1). The update is provided from the [WHO Provisional monthly measles and rubella](#) data as of 5 December 2023 (access on 10 January 2024).

### ECDC assessment:

Since 1 January 2023, EU/EEA countries have reported either sporadic cases or outbreaks of measles, following a period of unusually low activity during the COVID-19 pandemic. The substantial decline in cases of measles reported by EU/EEA countries from March 2020 until the end of 2022 is in contrast to the usual annual and seasonal pattern for measles, which peaks during the spring in temperate climates.

Although in 2023 the majority of EU/EEA countries are still reporting only sporadic measles cases, some measles outbreaks have been reported (in Austria, France, Romania). The overall number of measles cases in the EU/EEA is steadily increasing since June 2023. Considering the suboptimal vaccination coverage for the second dose  $\geq 95\%$  in the majority of the EU/EEA countries more measles cases are expected in the coming months and in the spring.

Active measles surveillance, prompt response actions and high vaccination uptake are the cornerstone for measles prevention. In advance for the expected increase of measles, it is key to identify and reach for vaccination eligible

individuals, with the aim to receive vaccination on time as per national calendar, including very young children who are more at risk of a severe form of the disease.

### Actions:

ECDC is monitoring the measles situation through its epidemic intelligence activities, which supplement monthly outputs with measles surveillance data from TESSy routinely submitted by 29 EU/EEA countries. ECDC's latest advice on measles, '[Who is at risk of measles in the EU/EEA?](#)', was published on 28 May 2019.

**Last time this event was included in the Weekly CDTR:** 15 December 2023

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

### Overview:

**Summary:** In 2023, and as of 8 January 2024, 157 cases of diphtheria have been reported in the EU/EEA through The European Surveillance System (TESSy). Cases have been reported in Germany (107), the Netherlands (14), Belgium (12), Czechia (7), Slovenia (4), Latvia (3), Norway (3), Sweden (3), Luxembourg (2), Slovakia (1) and Spain (1).

This represents an increase of 26 cases since the previous update on 12 December 2023, including one additional death. The new cases have been reported from Germany (17, including one death), Belgium (6), Sweden (2) and Czechia (1).

Among all the cases reported in 2023, 119 cases were caused by *Corynebacterium diphtheriae* and the remaining 38 cases were caused by *Corynebacterium ulcerans*. A hundred and thirty-six of the 157 cases had a cutaneous clinical presentation. These cases were from Germany (101), the Netherlands (11), Belgium (7), Czechia (5), Slovenia (4), Sweden (3), Norway (2), Latvia (1), Slovakia (1) and Spain (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 one case was reported as another clinical presentation. For two 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 157 cases of diphtheria reported in 2023, 54 cases were classified as imported from the following countries: Afghanistan (24), Syria (10), Sudan (2), Philippines (2), Türkiye (2), Croatia (1), Ethiopia (1), Eritrea (1), Indonesia (1), Iraq (1), Slovenia (1), and Thailand (1), and for seven cases, the origin of importation was unknown. Eight cases were reported as import-related. Forty-one cases were not imported, and the importation status was unknown for 54 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 8 January 2024, 424 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 to 3 January 2024, the [United Kingdom Health Security Agency](#) (UKHSA) reported 13 confirmed cases of diphtheria among asylum-seekers in England, no new cases reported in November and December.

In 2023 (as of national report on 3 January 2024), [Switzerland's Federal Office of Public Health](#) reported 28 confirmed cases of diphtheria in the country, an increase by three cases since 4 December 2023.

**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 8 January 2024, 157 cases of diphtheria, including three deaths, have been reported in the EU/EEA through TESSy.

Cases were reported in Germany (107), the Netherlands (14), Belgium (12), Czechia (7), Slovenia (4), Latvia (3), Norway (3), Sweden (3), Luxembourg (2), Slovakia (1), Spain (1). The deaths were reported in Belgium (1), Germany (1), and Latvia (1). Among all the cases reported in 2023, 119 cases, including two deaths, were caused by *C. diphtheriae*, and the remaining 38 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. diphtheriae*, 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 is 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.

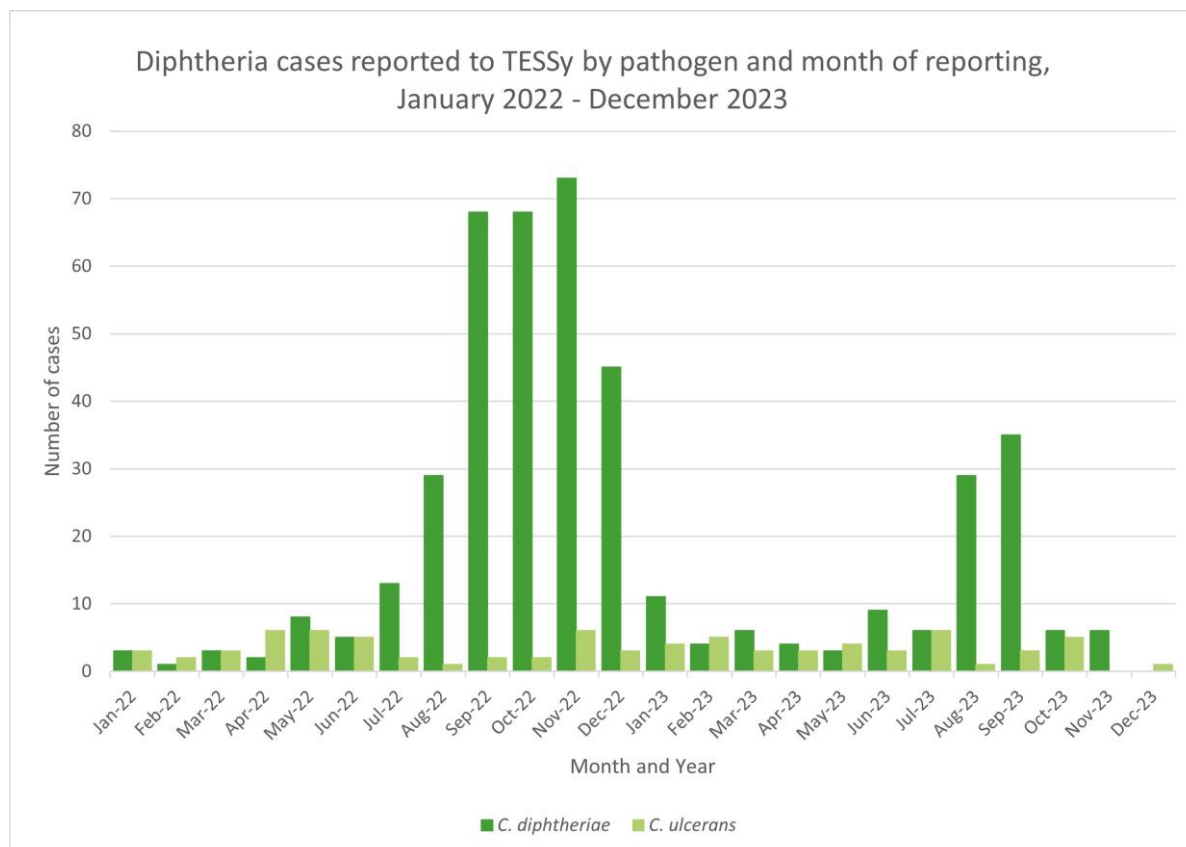
#### **Actions:**

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

**Last time this event was included in the Weekly CDTR:** 15 December 2023

## Maps and graphs

**Figure 1. Diphtheria cases reported to TESSy by pathogen and month of reporting, January 2022 - December 2023.**



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

### Overview:

**Update:** Since the previous update on 6 December 2023, no new MERS-CoV cases have been reported by WHO or national health authorities.

**Summary:** Since the beginning of 2023, and as of 10 January 2024, two MERS-CoV cases have been reported with the date of onset in 2023 by the United Arab Emirates (1) and Saudi Arabia (1).

Since April 2012, and as of 10 January 2024, a total of 2 617 cases of MERS-CoV, including 947 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](#)

### 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 European Union (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 \(MERS-CoV\)](#) on 22 January 2020.

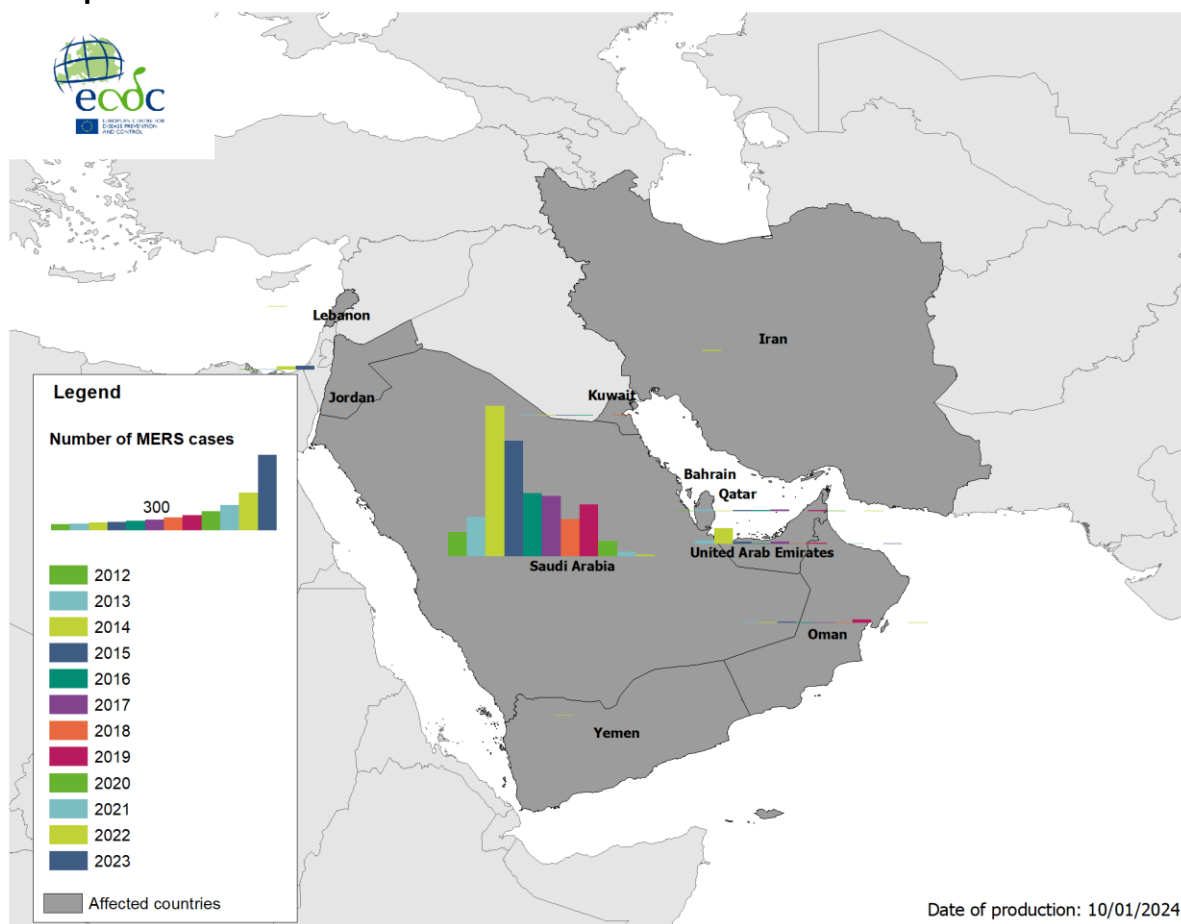
**Actions:**

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

**Last time this event was included in the Weekly CDTR: 08 December 2023**

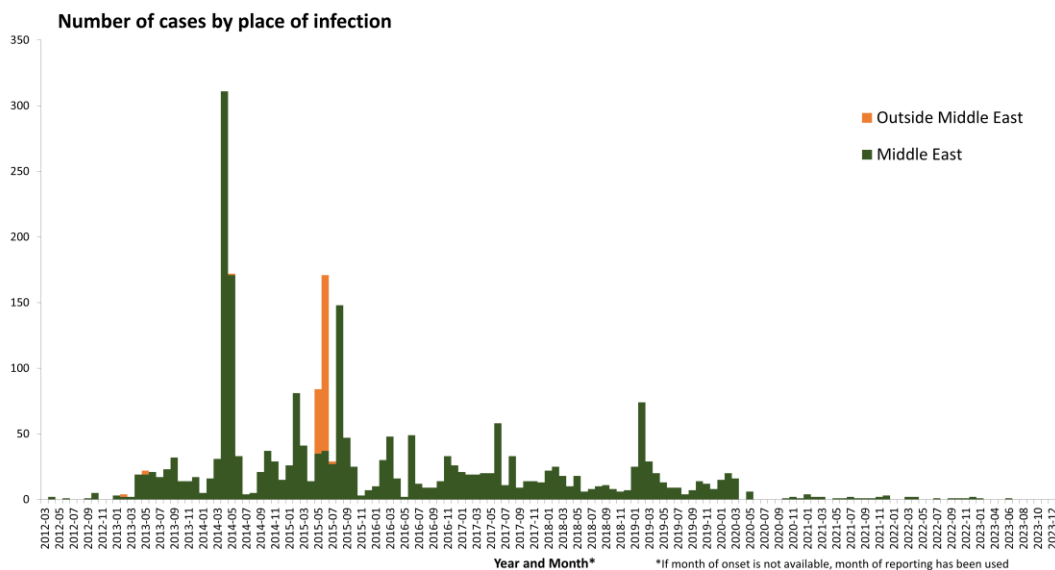
**Maps and graphs**

**Figure 1. Geographical distribution of confirmed MERS-CoV cases by country of infection and year, from April 2012 to December 2023**



Date of production: 10/01/2024

**Figure 2. Distribution of confirmed cases of MERS-CoV by place of infection and month of onset, March 2012– 10 January 2024**



## 6. Poliomyelitis – Multi-country (World) – Monitoring global outbreaks

### Overview:

Global public health efforts to eradicate polio are continuing through the immunisation of every child until transmission of the virus stops and the world becomes polio free. On 5 May 2014, polio was declared a public health emergency of international concern (PHEIC) by the World Health Organization (WHO) due to concerns over the increased circulation and international spread of wild poliovirus in 2014.

On 12 December 2023, the [37th meeting](#) of the Polio Emergency Committee under the International Health Regulations (IHR) (2005) was held to discuss the international spread of poliovirus and it was agreed that it remains a PHEIC. It was recommended that the Temporary Recommendations be extended for a further three months.

In June 2002, the WHO European Region was officially declared polio free.

On 21 September 2023, WHO released a [statement](#) declaring the end of the poliovirus outbreak in Ukraine that began in October 2021. This decision was supported by the European Regional Commission for the Certification of Poliomyelitis Eradication during its annual meeting on 8 September 2023.

### **Wild poliovirus type 1 (WPV1):**

Since 24 October 2023, and as of 10 January 2023, one new case of acute flaccid paralysis (AFP) caused by WPV1 with symptom onset in 2023 was reported from Pakistan (1).

### **Circulating vaccine-derived poliovirus (cVDPV):**

Since the previous update, new cases of poliomyelitis were reported with date of onset in 2022: five new cases of polio due to circulating vaccine-derived poliovirus type 1 (cVDPV1) was reported in the Democratic Republic of the Congo (DRC).

Since the previous update, the following cases of polio due to cVDPV were reported with the date of onset of symptoms in 2023:

- There were 15 new cases of AFP caused by cVDPV1, reported from the DRC (14) and Madagascar (1).
- There were 67 new cases of AFP caused by cVDPV2 reported from 11 countries, including four new countries: Chad (6), the DRC (9), Guinea (21), Indonesia (2), Mali (3), Mauritania (1)(new), Mozambique (1)(new), Niger (1)(new), Nigeria (21), South Sudan (1)(new), Tanzania (1).
- No cases of AFP due to cVDPV3 were reported.

**Summary:****Wild poliovirus (WPV):**

In 2022, and as of 10 January 2023, 30 cases (no change since the previous report) of AFP caused by WPV1 were reported. These were reported from the two endemic countries, Pakistan (20) and Afghanistan (2), and one non-endemic country: Mozambique (8). One associated death were reported in Pakistan.

In 2023, and as of 10 January 2023, 12 cases of AFP caused by WPV1 were reported from Afghanistan (6) and Pakistan (6), with symptom onset in 2023.

**Circulating vaccine-derived poliovirus (cVDPV):**With the date of onset of symptoms in 2022:

In 2022, and as of 10 January 2024, 193 cases of AFP caused by cVDPV1 were reported from five countries: Congo (1), the DRC (150, an increase of two cases), Mozambique (22), Madagascar (16) and Malawi (4).

Overall in 2022, 689 cases of AFP caused by cVDPV2 were reported from 20 countries: Algeria (3), Benin (13), Burundi (1), Cameroon (3), Central African Republic (6), Chad (44), the DRC (372), Eritrea (1), Ethiopia (1), Ghana (3), Indonesia (1), Mali (2), Mozambique (4), Niger (16), Nigeria (48), Somalia (5), Sudan (1), Togo (2), the United States (1) and Yemen (162).

In 2022, one case of AFP caused by cVDPV3 was reported from Israel.

With the date of onset of symptoms in 2023:

In 2023, and as of 10 January 2024, 124 cases of AFP caused by cVDPV1 were reported from three countries: the DRC (97), Madagascar (24) and Mozambique (3).

In 2023, 332 cases of AFP caused by cVDPV2 were reported from 21 countries: Benin (3), Burkina Faso (2), Burundi (1), Central African Republic (14), Chad (50), Côte d'Ivoire (5), the DRC (117), Guinea (34), Indonesia (5), Israel (1), Kenya (8), Mali (12), Mauritania (1) (new), Mozambique (1) (new), Niger (1) (new), Nigeria (43), Somalia (5), South Sudan (1) (new), Tanzania (3), Yemen (3) and Zambia (1).

In 2023, no cases of AFP caused by cVDPV3 were reported.

**Other news:**

On 11 January 2024, [WHO DON](#) reported an cVDPV2 detection in six individuals, four of which were reported from October 2022 to February 2023 in Aceh province (n=3) and in West Java province (1), two most recent cases were confirmed on 20 and 27 December 2023 from Klaten District, Central Java Province in a 6-year-old girl with travel history to Madura island (Sampang district, East Java Province). A second case is a one-year-old boy from the neighbouring Pamekasan on Madura Island, East Java. Both districts have sub-optimal vaccination coverage: in Klaten district, where the current case is reported, the coverage for four doses of bivalent oral polio vaccine (bOPV) and inactivated polio vaccine 1 (IPV1) was at 89.8% and 88.6% respectively in 2022. In the Pamekasan District, where the second case was reported, the coverage for bOPV and IPV1 were 88.1% and 74.1%, respectively in 2022. Measures have been implemented. Coordination across country and regional levels with the global polio eradication initiative is ongoing. The overall risk is assessed as high at the national level. At the regional level the overall risk is assessed to be moderate.

In December 2023, [WHO](#) issued its first-ever prequalification approval for a vaccine used under its Emergency Use Listing (EUL) regulatory pathway – novel oral polio vaccine type 2 (nOPV2). Since rollout of this next-generation vaccine began in March 2021, the Global Polio Eradication Initiative (GPEI) has administered nearly 1 billion doses of nOPV2 across 35 countries. Prequalification will enable additional countries to access the vaccine more easily for more sustainable response to outbreaks of type 2 variant poliovirus (cVDPV2).

**Sources:** [Global Polio Eradication Initiative](#) | [ECDC](#) | [ECDC dashboard](#) | [WPV3 eradication certificate](#)

**ECDC assessment:**

The WHO European Region, including the EU/EEA, has remained polio free since 2002. Inactivated polio vaccines are used in all EU/EEA countries.

As long as there are non-vaccinated or under-vaccinated population groups in European countries and poliomyelitis is not eradicated globally, the risk of the virus being reintroduced in Europe remains. One EU/EEA country (Romania) and three neighbouring countries (Bosnia and Herzegovina, Montenegro, and Ukraine) remain at high risk of a sustained polio outbreak following wild poliovirus importation or the emergence of circulating vaccine-derived poliovirus (cVDPV), due to suboptimal programme performance and low population immunity, according to the [European Regional Certification Commission for Poliomyelitis Eradication \(RCC\)](#) report published in February 2023, referring to data from 2021. According to the same report, eight EU/EEA countries are at intermediate risk of sustained polio outbreaks. The continuing circulation of wild poliovirus type 1 (WPV1) in Pakistan and Afghanistan and the detection of WPV1 cases in Mozambique in 2022, which are genetically linked to a strain from Pakistan, shows that there is still a risk of the disease being imported into the EU/EEA. Furthermore, the worrying outbreaks of cVDPV, which emerge and circulate due to lack of polio immunity in the population, illustrate the potential risk for further international spread.

To limit the risk of reintroduction and sustained transmission of WPV and cVDPV in the EU/EEA, it is crucial to maintain high vaccine coverage in the general population and increase vaccination uptake in pockets of under-immunised populations. EU/EEA countries should review their polio vaccination coverage data and ensure that there are no immunity gaps in the population and that there is capacity to identify virus circulation through well-performing surveillance systems.

ECDC endorses WHO's temporary recommendations for EU/EEA citizens who are residents of or long-term visitors to (>4 weeks) countries categorised by [WHO](#) as having the potential risk of causing international spread of polio: an additional dose of poliovirus vaccine should be administered between 4 weeks and 12 months prior to international travel. Travellers to areas with active transmission of a wild or vaccine-derived poliovirus should be vaccinated according to their national schedules.

**ECDC links:** [ECDC comment on risk of polio in Europe](#) | [ECDC risk assessment](#)

**Actions:**

ECDC provides updates on the polio situation on a monthly basis. ECDC also monitors polio cases worldwide through its epidemic intelligence activities in order to highlight polio eradication efforts and identify events that increase the risk of wild poliovirus being reintroduced into the EU/EEA.

ECDC maintains a [dashboard](#) showing countries that are still endemic for polio and have ongoing outbreaks of cVDPV.

**Last time this event was included in the Weekly CDTR:** 01 December 2023