

WEEKLY BULLETIN

Communicable Disease Threats Report Week 10, 5–11 March 2023

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1. Weekly summary

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

- In week 9, 2023 (week ending 5 March 2023), there were no increasing trends in any of the EU/EEA indicators based on pooled country data. There has been a reduction in the number of countries reporting increasing trends, suggesting an overall improvement in the epidemiological situation compared to the previous week. Among countries reporting increases compared to the previous week, values of indicators remain low (cases and deaths below 10% and hospital indicators below 25%) relative to the maximum reported during the pandemic.
- As of 10 March 2023, 84 771 sequences have been deposited in GISAID EpiCoV belonging to XBB.1.5 lineage. Most of these submissions are from the United States (54 524 sequences), the United Kingdom (8 259 sequences), and the rest of Europe (11 730 sequences). The presence of XBB.1.5 in the EU/EEA accounts for a median proportion of 35.5% (range: 11-64%) in the countries that reported data for week 7 2023.
- According to China CDC's latest update on 4 March 2023, the COVID-19 situation in mainland China has stabilised to between 10 000 and 15 000 cases per day, with fluctuations within that range. The decreasing trend in hospitalisations and deaths have also stabilised.

Group A streptococcal infection - Multi-country - 2022 - 2023

- Denmark reports that iGAS cases are currently more frequent than usual in all age groups. A new subvariant of emm1 has been detected.
- IGAS cases in Ireland peaked in the second half of 2022 and have declined since, but remain at higher levels in January and February 2023 compared to previous seasons.

- The UK continues to report a decrease in iGAS cases since December 2022 for the current season. A total of 2 178 iGAS cases have been reported this season 2022-2023.

Influenza – Multi-country – Monitoring 2022/2023 season

- The seasonal epidemic activity threshold of 10% positivity in sentinel specimens was first crossed in week 45/2022.
- Influenza activity had been decreasing across the Region after a peak at week 51/2022 until week 4/2023, and increased again up to week 7/2023 due to increased type B virus circulation.
- Overall this season, influenza A(H3) viruses have dominated in sentinel primary care specimens. However, a higher circulation of A(H1)pdm09 and type B viruses was observed starting from week 50/2022 and week 2/2023, respectively. A similar distribution 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 hospitalised patients in ICU and other wards and influenza A(H1)pdm09 viruses have dominated in SARI specimens.

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

- Measles activity continues to be low in the EU/EEA, but outbreaks have started to occur, e.g. in Austria and Slovakia. In January 2023 (data access 7 March 2023), a total of nine confirmed cases of measles were reported to TESSy by six EU/EEA countries.
- On a global scale, cases and outbreaks have been reported in England (UK), Ukraine, and India, and are being reported in different WHO Regions (AFRO, PAHO), including the Democratic Republic of the Congo, Republic of Tanzania, South Africa, Canada, and the United States.

Monthly diphtheria epidemiological monitoring in the EU/EEA - 2023

- In 2023, and as of 1 March, 14 diphtheria cases with no associated deaths were reported in the EU/EEA through TESSy. Cases were reported in Germany (11), 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.

Iatrogenic botulism, exposure in Türkiye

- Since late February 2023, and as of 10 March 2023, 14 clinical botulism, apparently iatrogenic, due to intragastric injection of botulism neurotoxin, have been reported in Germany (12 cases), Austria (1 case), and Switzerland (1 case) with treatments performed in Türkiye on dates between 22-25 February 2023.
- Among 10 cases with known information, the same clinic in Istanbul, Türkiye, has been reported.
- There is a risk of intoxication for those travelling to Türkiye for medical treatments with intragastric injection of botulism neurotoxin.
- A [WHO medical product alert](#) reports the detection of falsified batches of a botulism neurotoxin product, also distributed in Türkiye in May 2022. However, it is not known if these batches have been used for treatment in the cases reported so far.

Poliomyelitis - Israel - 2023

- On 2 March, Israel's Ministry of Health [reported](#) on three additional asymptomatic children testing positive for polio virus.
- On 27 February, Israel's Ministry of Health issued an [official alert](#) describing a case of acute flaccid paralysis (AFP) that is highly suspicious for poliomyelitis.
- The case is an unvaccinated eight-year-old from the Safed area.
- Laboratory and epidemiological investigations are still ongoing.

Autochthonous Dengue - Ibiza, Spain - 2022

- On 1 February 2023, Germany informed Spain of two cases of dengue (one confirmed and one probable) and four compatible cases, with a history of travel to the Balearic Islands.
- A retrospective search identified the likely primary case to be a dengue case returning from Mexico to Ibiza in August 2022 who stayed in the same town in Ibiza as the autochthonous cases.
- The current likelihood of occurrence of local transmission events of dengue virus in mainland EU/EEA and Ibiza is very low as the environmental conditions are not favourable for the growth of mosquito populations and virus replication in the vector.

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

Overview:

Summary:

The epidemiological picture at the pooled EU/EEA level 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, hospitalisation, ICU admissions and deaths in this period.

In week 9 (week ending 5 March 2023), overall, there were no increasing trends in any of the EU/EEA indicators based on pooled country data. The pooled COVID-19 death rate decreased compared to the previous week, with 765 deaths reported from 23 countries in week 9.

There has been a reduction in the number of countries reporting increasing trends, suggesting an overall improvement in the epidemiological situation compared to the previous week.

Among countries reported increases compared to the previous week in key, in these countries, values of indicators remain low (cases and deaths below 10% and hospital indicators below 25%) relative to the maximum reported during the pandemic.

The following country-level trends were observed:

- Case rates among people aged 65 years and older increased in 10 of 25 countries with data. These trends have continued for the past 4-5 weeks in seven of the 10 countries.
- Eight among 22 countries reporting data observing increases in the last 1-5 weeks in at least one hospital or ICU indicator.
- No country reported increases in overall COVID-19 deaths, although increases in the 65-79 years and/or 80 years and above age groups were reported by six of the 21 countries with age-specific data.

Countries reporting high proportions of the XBB.1.5 variant of interest (VOI) include those in which increases in epidemiological indicators have been reported, as well as those with a low and stable epidemiological situation. Among the eight countries with an adequate volume of sequencing or genotyping for weeks 7–8 (13 February to 26 February 2023), the estimated variant distribution was 38.6% (16.9–52.5% from six countries) for XBB.1.5, 23.7% (18.1–47.6% from seven countries) for BQ.1, 21.7% (10.3–33.2% from seven countries) for BA.2.75, 7.4% (1.9–64.0% from eight countries) for BA.5, 4.0% (1.2–44.1% from seven countries) for XBB, 1.5% (0.3–30.1% from six countries) for BA.2, and 0.2% (0.1–0.8%, 11 detections from five countries) for BA.4.

The cumulative uptake of a first booster was 65.4% (country range: 11.3–87.1%) among adults aged 18 years and older, 84.9% (country range: 13.3–100.0%) among people aged 60 years and older 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: 0.2–41.9%) among adults aged 18 years and older, 35.5% (country range: 0.4–86.7%) among people aged 60 years and older, and 14.2% (country range: 0.2–33.6%) in the total population.

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 23 February 2023 and as of 9 March 2023, the following changes have been made to ECDC variant classifications for variants of concern (VOC), variants of interest (VOI), variants under monitoring and de-escalated variants:

- the Omicron lineages BF.7 and BA.2.3.20 were removed from the list of from variants under monitoring and added to the list of de-escalated variants.

BF.7 is a sub-lineage of BA.5 that accounted for 10-20% of the sequenced viruses in the EU/EEA at the end of 2022 and has since declined in proportions. BF.7.14, a sub-lineage of BF.7, has been reported at proportions around 30% in China. Currently there is no indication that this affected the EU/EEA variant landscape.

The Omicron lineage BA.2.3.20 is characterized by a notable number of private mutations, but has not been successful in spreading in the EU/EEA or other parts of the world.

Recommendations for public health authorities

ECDC encourages countries to remain vigilant, by reinforcing representative surveillance systems, sequencing capacity, and reporting, as outlined in the guidance published in July 2022, [Operational considerations for respiratory virus surveillance in Europe](#) and more recently published, [COVID-19 surveillance and study protocols](#).

Establishing strong and sustainable respiratory virus surveillance in the community will be critical in moving forward to reliably assess the relative contribution of different SARS-CoV-2 variant threats to the EU/EEA.

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

ECDC assessment of the XBB.1.5 sub-lineage

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

As of 10 March 2023, 84 771 sequences have been deposited in GISAID EpiCoV belonging to XBB.1.5 lineage. Most of these submissions are from the United States (54 524 sequences), the United Kingdom (8 259 sequences) and the rest of the Europe (11 730 sequences).

The [US CDC nowcast system](#) estimates the current proportion of the variant around 89.6% (previous week 85.4%) in the USA. For the last week with complete data (week 6 2023), the US CDC reports 71% XBB.1.5 (previous week 63%).

This lineage is currently estimated to have a large growth advantage relative to previously circulating lineages in North America (58%) and Europe (60%) (estimates provided by [CoV-spectrum](#) based on data from GISAID EpiCoV), though these estimates are associated with significant uncertainty.

The most likely explanation of the growth advantage is the already high level of immune escape demonstrated by XBB, combined with the effect of the spike change S486P. This mutation has previously been rare during the pandemic, probably due to it requiring two nucleotide substitutions in the same codon to change from Phenylalanine to Proline. Other variants with this change have however emerged before without becoming successful. A recent [preprint](#) demonstrates that XBB.1.5 is not associated with a higher reduction in neutralisation by vaccine and convalescent sera compared to XBB.1, but that it is associated with a higher ACE2 affinity, which could indicate that the advantage of XBB.1.5 compared to XBB.1 could be caused by an increase in intrinsic transmissibility. Further laboratory and epidemiological investigations are required to elucidate the mechanism of the growth advantage conferred by this change specifically in the XBB variant. There is currently no indication of any change in infection severity associated with the variant.

Based on GISAID EpiCoV data as of 6 March 2023, XBB.1.5 is increasing in proportions in most of the EU/EEA countries with adequate sequence reporting volume. The estimated proportions for week 7 2023 and week 6 2023 (in parenthesis) are: Austria 16% (18%), Belgium 38% (22%), Czechia 62% (56%), Denmark 33% (31%), Finland 29% (16%), France 40% (30%), Germany 33% (27%), Iceland 39% (51%), Ireland 64% (54%), Italy 29% (16%), Lithuania 12% (7.3%), Luxembourg 38% (36%), Netherlands 53% (45%), Poland 11% (21%), Spain 49% (47%) and Sweden 24% (21%). The presence of XBB.1.5 in the EU/EEA accounts a median proportion of 35.5% (range: 11-64%) in the countries that reported data for week 7 2023.

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

Public Health Emergency of International Concern (PHEIC):

On 30 January 2020, the World Health Organization (WHO) declared that the outbreak of COVID-19 constitutes a PHEIC. On 11 March 2020, the Director-General of WHO declared the COVID-19 outbreak a pandemic.

The [third](#), [fourth](#), [fifth](#), [sixth](#), [seventh](#), [eighth](#), [ninth](#), [tenth](#), [eleventh](#), [twelfth](#), [thirteenth](#), and [fourteenth](#) International Health Regulations (IHR) Emergency Committee meetings for COVID-19 were held in Geneva on 30 April 2020, 31 July 2020, 29 October 2020, 14 January 2021, 15 April 2021, 14 July 2021, 22 October 2021, 13 January 2022, 11 April 2022, 8 July 2022, 13 October 2022, and 27 January 2023 respectively. The Committee concluded during these meetings that the COVID-19 pandemic continues to constitute a PHEIC.

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

Please refer to the [data reported by 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:

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

Actions:

On 27 January 2022, ECDC published its Rapid Risk Assessment, '[Assessment of the further spread and potential impact of the SARS-CoV-2 Omicron variant of concern in the EU/EEA, 19th update](#)'.

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

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

Further information:

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

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

Update

On 4 March 2023, China CDC [published](#) an epidemiological update on the COVID-19 situation in mainland China including data until 2 March 2023. According to the report, on 2 March 2023, 11 339 positive nucleic acid tests and 320 positive antigen tests were reported. Following the peak on December 2022, the COVID-19 situation in mainland China has stabilized between 10 000 and 15 000 cases per day with fluctuations within that range. Additionally, there were 8 severe COVID-19 cases hospitalised on 2 March 2023 (99.9% decrease compared to the 128 000 severe cases hospitalised during the peak on 5 January 2023). No deaths were reported in hospitals from 24 February to 2 March. The decreasing trend in hospitalisations and deaths has stabilized.

Recently, China's Influenza Surveillance system has detected an increase in the weekly number Influenza-like illness (ILI) for the period 13 to 26 February. Positive rate for Influenza among ILI samples reached 25.1% for the period 20-26 February.

According to the [WHO COVID-19 Dashboard](#), since 3 January 2020 and as of 7 March 2023, a total of 99 109 603 COVID-19 confirmed cases and 120 227 deaths have been reported to WHO (including Taiwan and Special Administrative Regions).

Information on variants from public sources

From 1 January 2023 to 9 March 2023, China has deposited 15 776 sequences. As of 9 March 2023, of the total 20 117 sequences submitted from China, 6 756 sequences had recent sample collection dates between 1 January 2022 and 4 March 2023 in GISAID EpiCoV. These sequences mainly belonged to the lineages BA.5.2.48 (60.9%), BF.7.14 (28.1%), BA.5.2.49 (6.3%) and BA.5.2 (2.3%). Other lineages (including their sub-lineages) circulating in proportions below 1% including XBB.1.5 (5 samples) and BQ.1 (6 samples).

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

Assessment

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

There are currently no data suggesting the emergence of new variants of concern in China. The China CDC is currently providing weekly epidemiological updates which show a significant improvement in the epidemiological situation across the country for all monitored indicators. The surge of cases in China between December and January did not influence the epidemiological situation in the EU/EEA.

ECDC actions

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

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

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

3. Group A streptococcal infection – Multi-country – 2022–2023

Overview:

Update

Since the previous report, the following countries have reported updates on invasive group A streptococcal disease (iGAS):

Denmark: In its [update](#) with data up to 28 February 2023, Statens Serum Institut (SSI) reports that iGAS cases are currently more frequent than usual in all age groups, with the highest incidence among those >65 years of age and among children 0-5 years. IGAS incidence peaked in January 2023 (50/100 000 population) and is currently decreasing, but remains higher than has been reported since 2018. Septicaemia is the more common clinical presentation in adults and children. MLST-28/emm-1.0 and MLST-36/emm-12.0, were detected in 51% and 33% of sequenced isolates in February 2023, but a new subvariant of MLST-28/emm-1.0, with a unique combination of virulence genes, has been identified.

Ireland: The Health Protection Surveillance Centre (HPSC) [reports](#) that from 2 October 2022 to 25 February 2023, 152 iGAS cases were reported, of which 56 were <18yrs of age and 48 <10 yrs. Paediatric cases represent 37% of all iGAS cases, which is higher than the expected 25% during pre-pandemic years. The increase observed in the second half of 2022 is the first time a peak has been reported outside this usual peak period (which is usually in the first half of the year). IGAS notifications still [remained](#) at high levels in January and February 2023 compared to previous seasons.

Since October 2022, six paediatric deaths from iGAS have been reported, and 10 in adults.

United Kingdom: In its [update](#) with data up to 28 February 2023, the UK Health Security Agency report 2 606 new scarlet fever cases. Since the start of the season, a total of 47 084 cases of scarlet fever were notified from week 37 to week eight (season 2022 to 2023), peaking at 9 886 notified cases in week 49, 2022. The last peak season for scarlet fever notifications was in 2017-2018, with a total of 30 768 notified cases.

A total of 2 178 iGAS cases have been reported this season through laboratory surveillance, peaking in week 52, 2022 at 226 notified cases. A decline in weekly laboratory notifications has been observed since week 52. The last comparably high season was observed in 2017-2018, with a total of 2 898 notified cases. There have been 522 iGAS cases in children <18 years in the current season (24% of total).

There have been 285 iGAS-related fatalities recorded across all age groups. Among these, 185 were recorded in people aged 65 years and over, and 34 in children aged 14 years and under.

Summary

On 2 December 2022, an increase in iGAS and scarlet fever notifications caused by diverse emm types was observed in the EU/EEA and the UK, including associated fatalities. Following the first reports on the increase of iGAS and scarlet fever notifications, retrospective studies on surveillance data showed an increase in iGAS and scarlet fever cases since the beginning of 2022 in some EU/EEA countries. Other countries outside the EU/EEA have also issued [alerts](#) on recent increases in iGAS among children. In the EU/EEA, the increase in iGAS notifications has been reported by [France](#), [Ireland](#), [the Netherlands](#), and [Denmark](#). Other EU/EEA [countries](#) have reported an increase in iGAS cases compared to the previous season but with a lower incidence than before the pandemic.

The age groups most affected are children <10 years old and people aged >65 years. According to available data, consultations for scarlet fever and iGAS notifications peaked in the pre-Christmas period in December 2022, followed by a decreasing trend in January 2023.

On 12 December 2022, ECDC published a [news item](#) in collaboration with the WHO Regional Office for Europe advising countries to remain vigilant against increases in GAS and iGAS infections and to increase awareness among healthcare professionals and parents of young children.

ECDC assessment:

Group A streptococcus (GAS) is considered the most common cause of bacterial pharyngitis in school-aged children. It may also affect the younger siblings of affected children. The incidence of GAS pharyngitis usually peaks during winter months and early spring. Outbreaks in kindergartens and schools are frequently reported. GAS pharyngitis is easily diagnosed by a rapid antigen detection test (Rapid Strep) and/or bacterial culture and treated with antibiotics and supportive care. Good hand hygiene and general personal hygiene (e.g. avoid sharing utensils, drinking glasses, and personal items, etc.) can help to control transmission within these settings.

Invasive GAS (iGAS) infections are rare life-threatening systematic infections, complicating simple scarlet fever or pharyngitis. Children recovering from viral infections, e.g. varicella (chickenpox), influenza, etc. are at higher risk of developing iGAS infection.

Neither GAS nor iGAS infections are notifiable at the EU level, and the ability to assess increased circulation in EU/EEA countries is limited as a result. However, WHO and ECDC currently assess that the risk posed by iGAS to the general population is low, given that the current increase in iGAS cases is relatively low overall, the reported cases are not caused by a new strain, and the disease is easily treatable with antibiotics.

This season, typing data suggest that the surge of iGAS cases is not related to a specific or new strain or an increase in antibiotic resistance of GAS. The most common emm types reported are emm 1 and emm 12. Countries experiencing an increased number of cases are encouraged to share any emm-typing, M-typing, multilocus sequence typing (MLST), and/or whole genome sequencing (WGS) data via the related EpiPulse event page.

Actions:

ECDC has opened an EpiPulse item and invited EU/EEA countries and the UK to share information on GAS and iGAS infections. In addition, in collaboration with the WHO Regional Office for Europe, EU/EEA countries and the UK have been contacted by ECDC through EpiPulse about the current situation related to GAS and iGAS infections.

In collaboration with the WHO Regional Office for Europe, ECDC has also published a [news item](#) advising countries to be vigilant against increases in GAS and iGAS infections, and to increase awareness among healthcare professionals and parents of young children.

ECDC is continuing to monitor this event through its epidemic intelligence activities and will report when relevant epidemiological updates are available.

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

Overview:

Summary: In 2023, and as of 1 March, 14 diphtheria cases were reported in the EU/EEA through The European Surveillance System (TESSy). Cases were reported in Germany (11), Czechia (2), and Norway (1). Among these cases, 10 cases were caused by *Corynebacterium (C.) diphtheriae* and the remaining four cases were caused by *Corynebacterium (C.) ulcerans*. Thirteen of the 14 cases had a cutaneous clinical presentation: Germany (11), 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 1 March, no fatal cases have been reported in the EU/EEA.

Among these 14 diphtheria cases reported in TESSy, two cases were classified as imported cases from Afghanistan (1) and the Philippines (1), four cases were not imported and for eight cases the importation status was unknown. ECDC has no information indicating community transmission and 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: As of 7 March 2023, complementary epidemic intelligence surveillance of official public sources and media sources has detected a [news item](#) from the Latvian Disease Prevention and Control Centre reporting one confirmed diphtheria case in Latvia on 1 March 2023. This is the first confirmed case of diphtheria in Latvia in three years. No additional cases have been detected in other EU/EEA countries during this period.

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

From 1 January to 27 February 2023, the [Switzerland Federal Office of Public Health](#) reported three 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 1 March, 14 diphtheria cases were reported through TESSy in the EU/EEA. Cases were reported in Germany (11), Czechia (2) and Norway (1).

In 2022, 157 diphtheria cases attributable to *C.diphtheriae* in the EU/EEA were reported to TESSy. In the same period, 26 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](#).

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

Overview:

In January 2023, six EU/EEA countries reported nine 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 January 2023 were reported in Austria (1), Germany (2), France (3), Italy (1), Slovakia (1), and Spain (1). Measles activity remains low.

As of 7 March 2023, complementary epidemic intelligence surveillance of official public and media sources has detected two measles outbreaks in the EU/EEA (Austria and Slovakia). Six EU/EEA countries have reported 44 new suspected and/or confirmed cases of measles in the past month: Austria (34), Germany (2), Ireland (4), Italy (3), and Slovakia (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 2022 or 2023 to date, based on TESSy and epidemic intelligence data.

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

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 34 cases of measles reported in 2023 as of 3 March 2023, affecting four regions: Styria (30), Vienna (2), Carinthia (1), and Upper Austria (1). Thirty cases have been detected in Styria, a region in which the first case was detected in week 4. The highest number of cases was reported in week 7 (21). No cases of measles were reported in 2022. In 2021, Austria reported one case.

[Germany](#) reported 16 suspected and confirmed cases in week 9, 2023 (ending 5 March 2023), an increase of two cases since week 5, 2023 (ending 5 February 2023). (Note: the number provided in this report includes suspected cases and is therefore higher than the number provided to TESSy).

[Ireland](#) reported four cases in 2023 as of week 8 (ending 25 February 2023), an increase of four cases since the previous CDTR report.

[Italy](#) reported 18 cases of measles from January to December 2022, an increase of three cases since November 2022. The cases were reported from seven regions and one third of the cases occurred in October 2022. The median age of the cases is 29 years, 13 of the 18 cases were aged between 15 and 64 years but the highest incidence was observed in the age group 0-4 years. In addition, five of the reported cases occurred among health workers and 16 cases were not vaccinated at the time of infection. During the same observation period, seven cases of rubella have been reported, from seven regions, with a median age of nine years old.

[Slovakia](#) reported three cases in 2023 and, as of 28 February, an increase of one case since the notification of two cases on 08 February 2023. All three are unvaccinated young children (two-year-old, nine- and 18-month-old), two of the children did not have travel history.

Relevant epidemiological summary for countries outside the EU/EEA

[England, UK](#) reported seven new confirmed measles cases between October and December 2022. Three of these cases were had travel history to Somalia, three to Kenya, while the seventh was also import-related. Three of the confirmed cases (3 of 7) were in children under 10 years of age; all were unvaccinated. Overall, 47 cases have been reported in England from January to December 2022. Of the 47 reported and laboratory confirmed cases, twelve cases were imported from abroad (Kenya, Pakistan, Somalia, and United Arab Emirates).

[Ukraine](#) reported one case in January 2023 and 11 cases in January–December 2022.

India reports, according to [media](#), 143 cases and outbreaks of measles in four districts of Madhya Pradesh.

According to WHO Regional Office for Europe ([WHO Europe](#)) data for January–December 2022 (data access 08 March 2023) overall 902 cases of measles were reported in the region, of these 787 in the following non-EU/EEA countries: Albania (1), Azerbaijan(1), Bosnia and Herzegovina (6), Georgia (12), Kazakhstan (10), Kyrgyzstan (20), Russia (102), Tajikistan (451), Türkiye (115), Ukraine (11), the United Kingdom (50), and Uzbekistan (8). According to the same report in the EU/EEA, 115 confirmed cases were reported in Austria (1), Belgium (12), Bulgaria (1), Finland (1), France (19), Germany (14), Greece (1), Ireland (2), Italy (18), the Netherlands (6), Norway (1), Poland (25), Romania (9), Spain (1), and Sweden (4). In January 2023, Spain reported two cases.

Please note that numbers provided to WHO for EU/EEA countries are from TESSy data and, due to differences in reporting time, these numbers may not correspond to the data from epidemic intelligence screening.

According to the WHO Regional office for Africa ([AFRO](#)) report as of 26 February (week 9), cases and outbreaks of measles in 2022 and in 2023 were reported in the following countries: Cameroon, Chad, Congo, the Democratic Republic of the Congo (DRC), Ethiopia, Ghana, Guinea, Kenya, Liberia, Mali, Niger, Senegal, Sierra Leone, South Africa, South Sudan, Uganda, Zambia, and Zimbabwe. The United Republic of Tanzania reports increase in measles cases in all regions, the country faces low vaccination coverage. The event was closed in the Central African Republic on 24 February 2023. 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 (Vol. 29, No. 07-08), in 1-8 week 2023, three cases were reported the United States of America. In 2022, overall 166 cases were reported in five countries: the United States of America (118), Brazil (42), Canada (3), Argentina (2), and Ecuador (1). In addition, according to media, outbreak investigation is ongoing in Kentucky state, USA, following confirmation of one measles case who, while infectious, on 17-18 February 2023 participated in a large religious event with around 20 000 participants from different states and countries. The person was not vaccinated and had travel history abroad. One case was reported in [London, Canada](#), who has returned from India. This is the first case of measles in this area since 2014.

According to the WHO Western Pacific Region ([WPRO](#)) report for November 2022 (Vol 16, Issue 12), overall there were 1 437 confirmed and clinically compatible cases, including one death. The cases were reported by 10 countries: Australia (6), Cambodia (13), China (562), Hong Kong (3), Japan (6), Malaysia (191), the Philippines (524), Singapore (4), and Vietnam (126).

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 could explain the observed decline in cases. The lifting of non-pharmaceutical interventions related to the COVID-19 pandemic could lead to measles outbreaks in the EU/EEA. 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 of measles in the EU/EEA?](#)' on 28 May 2019.

6. Influenza – Multi-country – Monitoring 2022/2023 season

Overview:

Week 9/2023 (27 February - 5 March 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 from 27% in the previous week to 24% in week 9/2023 which remains above the epidemic threshold (10%).
- 17 of 39 countries or areas reported medium or high intensity and 21 of 39 countries reported widespread activity indicating substantial seasonal influenza virus circulation across the Region.
- Of the 24 countries that reported sentinel primary care specimen influenza virus positivity above the 10% epidemic threshold, Hungary, Netherlands, Romania and Slovenia 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 similar proportions of type A and B viruses), other wards (only influenza type A viruses) and SARI surveillance (similar proportions of A(H1N1)pdm09 and type B viruses). Six countries or areas reported influenza virus positivity rates above 10% in SARI surveillance.

Source: [Flu News Europe](#)

ECDC assessment:

Influenza activity had been decreasing across the Region after a peak at week 51/2022 until week 4/2023, and increased again up to week 7/2023 due to increased type B virus circulation.

Actions:

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

7. Iatrogenic botulism, exposure in Türkiye

Overview:

As of 10 March 2023, Germany reports 12 cases of clinical botulism, apparently iatrogenic, due to intragastric injection of botulism neurotoxin (BoNT). The cases are middle-aged adults, originating from different regions of Germany, who underwent treatments with 1000-1500 units of BoNT in Türkiye between 22-25 February 2023. The clinical presentation of the cases ranged from mild to severe; several cases have been hospitalised among whom a number are reported to have been admitted to Intensive Care Units (ICU). Among eight cases with known information, all received treatment at the same clinic in Istanbul, Türkiye. There is no indication of treatment being organised by a commercial medical travel company at this time. Information received from patient interviews indicated a WhatsApp group was used to contact the hospital. Three cases who recalled the name of the BoNT product used on them, reported to have been treated with one and the same product.

Austria reports one case (female; 25-44 years) of apparently iatrogenic botulism after intragastric injection of BoNTs administered in Türkiye on 22 February 2023. The case reported receiving treatment, which was self-arranged, at the same clinic as the cases in Germany and Switzerland. The patient was hospitalised with botulism symptoms (ptosis, dysphagia, dyspnoea, neck weakness, generalised muscle weakness).

Switzerland (information reported to ECDC by France on behalf of Switzerland) reports one suspected case of botulism (female, 45-64 years), probably associated with intragastric injection of BoNT, also administered in Türkiye on 22 February 2023. The case reported receiving treatment at the same clinic as the cases in Germany and Austria.

Background information

In 2019, France reported a suspected case of botulism (female; 25-44 years) following intragastric injection of BoNT in Egypt (in order to lose weight), with hospitalisation in France.

A [WHO medical product alert](#) from August 2022, reported five falsified batches of a BoNT product detected in five countries - Jordan (May 2022), Türkiye (May 2022), Kuwait (June 2022), United Kingdom (June 2022), and Poland (July 2022). It is not known, however if these batches have been used for treatment in the cases reported so far.

Outbreaks of iatrogenic botulism, sometimes linked to counterfeit or unlicensed BoNT, have also been reported in the past following different clinical procedures, for example in [Egypt](#) and [Türkiye](#).

Botulism is a serious neuroparalytic illness caused by BoNTs mainly produced by the bacterium, *Clostridium botulinum*. The disease naturally occurs in four different forms: a) food-borne botulism, b) intestinal botulism, c) infant botulism, and d) wound botulism. There are two other forms of botulism which do not occur naturally: a) inhalation botulism and b) iatrogenic botulism, which is the most recent human-made form of botulism. Intoxication may occur as an adverse event following the administration of BoNTs for therapeutic or cosmetic reasons.

While it is considered rare, individuals receiving BoNT injections for cosmetic purposes (example: for facial wrinkle lines) or therapeutic treatments (example: for management of muscle spasticity), may develop iatrogenic botulism if they are injected with an excessive dose of the BoNTs.

Symptoms of iatrogenic botulism are characterised by weakness and difficulty swallowing. Toxicities following cosmetic treatment include ophthalmological and oropharyngeal symptoms (blurred vision, drooping eyelid, difficulty swallowing, and dry mouth) while toxicities following therapeutic treatments are linked with difficulty breathing and weakness.

The symptoms of botulism can be very severe requiring intensive-care treatment as well as the administration of an anti-toxin. Even when such treatments are available, complete recovery usually takes weeks to months. Limited information is available quantifying mortality in iatrogenic botulism cases. For food-borne botulism, 5–10% of cases are fatal.

Further information about botulism can be found on the websites of [ECDC](#), [US CDC](#), and [WHO](#).

ECDC assessment:

This is a multi-country outbreak of at least 14 cases of iatrogenic botulism in Germany (12 cases), Austria (1 case) and Switzerland (1 case) with gastric injections of BoNT administered in Istanbul, Türkiye on dates between 22-25 February 2023. The cases are middle-aged adults. Among ten cases with known information in Germany (8 cases), Austria (1 case), and Switzerland (1 case), all are reported to have received treatment at the same clinic. Considering the possible variation in the clinical presentation of botulism illness, it is possible that some cases are yet to be identified. New cases may occur, particularly among those travelling to Türkiye for medical treatments involving intragastric injection of BoNTs.

Individuals who have travelled to Istanbul, Türkiye for intragastric BoNT treatment and experience symptoms consistent with botulism illness (weakness, difficulty breathing and/or swallowing), are advised to seek medical attention as soon as possible. Patients may inform their health care provider of the present on-going multi-country outbreak.

Actions:

ECDC is monitoring the event in EpiPulse and via Epidemic Intelligence activities and is sharing information through the CDTR report. A teleconference call is scheduled with affected and involved countries, DG SANTE and WHO-Europe on 10 March 2023. ECDC encourages countries to report any information relevant to this outbreak in the EpiPulse event 2023-FWD-00013.

8. Poliomyelitis – Israel – 2023

Overview:

Update:

On 08 March the [global polio eradication initiative \(GPEI\)](#) characterised the poliovirus isolated from the stool samples of the previously reported acute flaccid paralysis (AFP) case as circulating vaccine derived poliovirus type 2 (cVDPV2).

Summary:

On 27 February 2023, the Israel [Ministry of Health issued an official alert](#) describing a case of acute flaccid paralysis (AFP). The case is an unvaccinated eight-year-old from the Safed area. The child arrived at the hospital with limb weakness and a sample was found positive for the polio virus. According to Israeli authorities, there is evidence of the continued existence of polio in the sewage of many localities.

On 2 March 2023, the Israel Ministry of Health reported three additional children testing positive for polio virus. All three children were asymptomatic with unknown vaccination status. They were close contacts to the previously described acute flaccid paralysis (AFP) case and identified through epidemiological investigation.

On 5 March 2023, the [Israel Ministry of Health](#) reported that two additional contacts of the initial AFP case tested positive for poliovirus, bringing the total number of asymptomatic contacts to five.

ECDC assessment:

This is the first cVDPV2 case reported from Israel. In September 2022, the country confirmed a cVDPV2 outbreak linked to the transmission in UK and US and with virus isolated in environmental samples only that had been collected between January to June 2022 from the Jerusalem District. In March 2022, Israel confirmed an outbreak of cVDPV3 in the Jerusalem area with virus isolated from one paralytic case, seven healthy contacts, and 58 environmental samples.

The risk of additional cases related to this event persists, especially in the areas with low polio vaccine coverage and in population groups with low polio vaccine uptake.

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, Ukraine) remain at high risk of a sustained polio outbreak following wild poliovirus importation or the emergence of cVDPV, due to sub-optimal 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 an intermediate risk of sustained polio outbreaks. The continuing circulation of wild poliovirus type 1 (WPV1) in Pakistan and Afghanistan and detection of WPV1 cases in Mozambique in 2022, 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 circulating vaccine-derived poliovirus (cVDPV), which emerges and circulates 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 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 (>4 weeks) to countries categorised by WHO as having the potential risk of the international spread of polio: an additional dose of poliovirus vaccine should be administered between four weeks and 12 months prior to international travel.

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

Actions:

ECDC is in contact with the WHO Regional Office of Europe, and will continue to monitor the event through epidemic intelligence activities.

9. Autochthonous Dengue – Ibiza, Spain – 2022

Overview:

In February 2023, Germany informed [Spain](#) of two cases of dengue (one confirmed and one probable), and four compatible cases with epidemiological links, with a history of travel to the Balearic Islands.

The confirmed case travelled to Ibiza between 23 and 30 August 2022 with a partner and a child. Symptoms compatible with dengue (fever, joint pain, and rash) began on 31 August for all three. The diagnosis of the case was confirmed in Germany on 8 September 2022 through the detection of dengue-NS-1-Ag antigen together with positive IgM and negative IgG serology. No diagnostic tests were performed for the child and the partner.

The probable case travelled to Ibiza, to the same location as the previously described group, between 6 and 13 October 2022, together with a partner and a child. On 13 October, the probable case started with symptoms: fever, headache, muscle and joint pain, retro-orbital pain, and rash. Serological tests made on 17 October in Germany, showed IgM positivity (no second sample was obtained). The child also presented mild symptoms compatible with dengue a day before the probable case, and the partner two or three days after the case, but diagnostic tests were not performed.

A [retrospective search](#) detected an imported case of dengue in Ibiza in 2022 who made a trip to Mexico (from 27 July to 10 August 2022) and then to Ibiza and stayed in the same town as the autochthonous cases, between 11 and 31 August 2022. On 11 August, the imported case started with symptoms – fever, severe headache, joint and muscle pain, nausea, and vomiting – and laboratory abnormalities. On 1 September, the diagnosis of dengue was made by IgM positivity. After an epidemiological and environmental evaluation by local authorities and taking into account that the case had adopted individual protection measures, it was concluded that the risk was moderate and therefore adulticide treatment against mosquitoes was considered unnecessary. Measures implemented included entomological surveillance, elimination of breeding sources of mosquitoes and informing the public.

ECDC assessment:

These are the first autochthonous cases of dengue identified in Ibiza, Spain. In Europe, the dengue virus is transmitted by the mosquito vector *Aedes albopictus*, which is [established](#) in a large part of Europe. To date, all autochthonous outbreaks of [dengue](#) in mainland EU/EEA have occurred between June and November. The presented cases occurred between August and October 2022. The current likelihood of occurrence of local transmission events of the dengue virus in mainland EU/EEA and Ibiza is very low as the environmental conditions are not favourable for the growth of mosquito populations and virus replication in the vector. More information is available on ECDC's webpage on autochthonous transmission of [dengue](#) virus in the EU/EEA, and in ECDC's [dengue](#) factsheet.

Actions:

ECDC is in contact with Spanish and German authorities. After the detection of the autochthonous cases in Ibiza, the authorities of the Balearic Islands convened a meeting of the stakeholders in February 2023, and have scheduled an entomological inspection prior to the start of the season (first half of March). A further meeting has been scheduled with the Ibiza Island Council and the five town halls of the island, for the implementation of strict surveillance and vector control plans prior to the beginning of the vector activity season.