WEEKLY BULLETIN

Communicable Disease Threats Report

Week 50, 11 - 17 December 2022

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1. COVID-19 associated with SARS-CoV-2 Multi-country (EU/EEA) - 2019–2022

Summary:
At the end of week 49, 2022 (week ending 11 December), EU/EEA-level COVID-19 case rates increased by 6%, both in those aged 65 years and older and overall (all ages) compared to the previous week. At the EU/EEA-level, hospital occupancy has increased since the previous week, while hospital and ICU admissions and ICU occupancy indicators remain stable. Overall, the EU/EEA death rate also continued to decrease and is at low levels compared to the pandemic maximum. Given the current reversal of trends for some epidemiological indicators and the evolving variant scenarios, it remains important to continue monitoring the epidemiological situation.

Notification rates increased for all ages and for those aged 65 years and above in 23 countries, and the two indicators concurrently increased in 18 countries. In six countries, country-level rates among those aged 65 years and older surpass 30% of the respective country pandemic maximum.

Pooled EU/EEA hospital and ICU admissions have remained stable compared to the previous week. Nine countries reported an increase in at least one admission indicator since the previous week. Hospital occupancy at EU/EEA level has increased by 13%, while ICU occupancy has remained stable, with eight countries reporting increases in at least one occupancy indicator compared to the previous week. The decreasing trend in the pooled EU/EEA COVID-19 death rate is continuing, with five countries in the EU/EEA reporting increases over the past week.

Forecasts of cases and deaths from the European COVID-19 Forecast Hub provide predictions for weeks 50 and 51. Compared with the previous week, increasing trends in cases and stable trends in deaths are forecast for the EU/EEA overall by the end of week 51.

The cumulative uptake of a first booster was 65.3% (country range: 11.3–86.9%) among adults aged 18 years and older, 84.8% (country range: 13.3–100.0%) among individuals aged 60 years and older and 54.6% (country

range: 9.2–75.7%) in the total population. The cumulative uptake of a second booster was 15.5% (country range: 0.1–41.4%) among adults aged 18 years and older, 33.1% (country range: 0.3–85.7%) among individuals aged 60 years and older and 12.7% (country range: 0.1–33.2%) in the total population.

Among the nine countries with an adequate volume of sequencing or genotyping for weeks 47–48 (21 November to 4 December 2022), the estimated distribution of variants of concern (VOC) or of interest (VOI) was 47.2% (18.9–93.7% from nine countries) for BA.5, 40.5% (25.3–69.4% from seven countries) for BQ.1, 8.0% (3.6–20.3% from nine countries) for BA.2.75, 5.5% (2.7–7.8% from four countries) for XBB, 0.9% (0.5–6.5%, 606 detections from nine countries) for BA.2 and 0.9% (0.5–2.6%, 336 detections from nine countries) for BA.4.

As of 20 June 2022, ECDC discontinued the data collection and publication of the number of COVID-19 cases and deaths worldwide. Please refer to World Health Organization (WHO) data on COVID-19 and WHO's

Weekly Epidemiological and Weekly Operational Updates page for non-EU/EEA countries.

For the latest COVID-19 country overviews, please see the dedicated web page**.**

Other news:

On 9 December 2022, the European Medicines Agency published a news item stating that monoclonal antibodies that are currently authorised for COVID-19 may have reduced effectiveness against new emerging strains of SARS-CoV-2. According to recent laboratory studies, monoclonal antibodies targeting the spike protein are less effective at neutralising Omicron strains BA.4.6, BA.2.75.2 and XBB. These monoclonal antibodies also show less effectiveness in neutralising BQ.1 and BQ.1.1 strains.

On 13 December 2022, the European Medicines Agency (EMA) published the assessment report for COVID-19 vaccine Spikevax (Moderna), supporting its use as a booster dose in adolescents aged 12 to 18 years. After reviewing the data submitted by Moderna Biotech, the EMA's Committee for Medicinal Products for Human Use (CHMP) recommended the use of Spikevax (50 micrograms) as a booster dose in adolescents aged 12 to 18 years.

On 15 December 2022, the European Medicines Agency's Committee for Medicinal Products for Human Use (CHMP) recommended authorising both Spikevax (Moderna) and its adapted BA.1 version for use as a booster in children aged 6 to 11 years.

Weekly update on SARS-CoV-2 variants:

Since the last update on 8 December 2022 and as of 15 December 2022, no changes have been made to ECDC variant classifications for variants of concern (VOC), variants of interest (VOI), variants under monitoring, and deescalated variants.

For the latest information on variants, please see ECDC's webpage on variants.

Public Health Emergency of International Concern (PHEIC):

On 30 January 2020, the World Health Organization (WHO) declared that the outbreak of COVID-19 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, and thirteenth 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, and 13 October 2022 respectively. The Committee concluded during these meetings that the COVID-19 pandemic continues to constitute a PHEIC.

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.

2. *C. diphtheriae* among migrants – Europe – 2022

Summary: As of 13 December 2022, and since the last update on 7 December 2022, Austria (17) and Belgium (2) have reported new cases.

Background: Since the beginning of 2022, and as of 13 December 2022, there have been 172 cases of diphtheria among migrants reported by eight EU/EEA countries: Austria (59), Belgium (20), France (14), Germany (64), Italy (2), the Netherlands (5), Norway (7) and Spain (1). Cases have also been reported in Switzerland (25) and the United Kingdom (53), bringing the overall number for Europe to 250.

Among these cases, the majority presented with the cutaneous form of the disease (n=168)**,** 37 cases had respiratory diphtheria, four cases had both respiratory and cutaneous presentations, 23 cases were asymptomatic, and information was missing for 18 cases. All cases were caused by toxigenic *C. diphtheriae,* and the majority were detected in male migrants aged eight to 49 years.

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

On 11 November 2022, the UK Health Security Agency published updated guidelines on the control and management of diphtheria in England as well as a supplementary guidance document for cases and outbreaks in asylum-seeker accommodation settings.

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

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

On 1 December 2022, the United Kingdom Health Security Agency (UKHSA) released 'Supplementary guidance for cases and outbreaks in asylum seeker accommodation settings', in which antimicrobial susceptibility testing of all *C. diphtheriae* isolates is recommended.

ECDC assessment:

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

The increase in cases reported among this group and the occurrence of similar outbreaks in several EU/EEA countries recently is unusual and needs to be carefully monitored, alongside the implementation of necessary public health measures to avoid the occurrence of more cases and further spread.
In this context, the probability of developing the disease is very low for individuals residing in the community, provided they have completed a full diphtheria vaccination series and have an up-to-date immunisation status. Nevertheless, the possibility of secondary infections in the community cannot be excluded and severe clinical diphtheria is possible in unvaccinated or immunosuppressed individuals.

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

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

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

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

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

Actions:

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

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

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

Overview:

From January to October 2022, overall 14 EU/EEA countries reported 104 confirmed cases of measles to TESSy (detailed data available in ECDC Surveillance Atlas of Infectious Diseases). The most recent cases in October 2022 were reported in Belgium (2), Germany (3), France (3), Italy (2) and Poland (3).

As of 13 December, complementary epidemic intelligence surveillance of official public sources and media had not detected any measles outbreaks in the EU/EEA. Two EU/EEA countries have reported nine suspected and/or confirmed cases of measles in the past month: Germany (5) and Ireland (4). Other countries did not report new cases of measles or updates for previous periods.

No measles-related deaths have been reported in the EU/EEA in 2022 to date, based on TESSy and epidemic intelligence data.

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

Disclaimer: *the monthly measles report published in the CDTR provides the most recent data on cases and outbreaks from 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 The European Surveillance System (TESSy). Data presented in the two monthly reports may differ.*

Epidemiological summary for EU/EEA countries with epidemic intelligence updates since last month
Germany reported 69 suspected and confirmed cases in weeks 1 to 49 (ending 11 December 2022), an increase of four cases since the previous report on week 44 (ending 6 November 2022).
Ireland reported ten cases in 2022 as of week 48 (ending 3 December 2022), an increase of five cases since week 43 (ending 29 October 2022).

Relevant epidemiological summary for countries outside the EU/EEA
According to the WHO Regional Office for Europe **(WHO/EUROPE)** data for January–October 2022 (data access 13 December 2022), overall 725 cases of measles were reported in the Region, of these 625 were in the following non-EU/EEA countries: Armenia (15), Azerbaijan(1), Bosnia and Herzegovina (3), Georgia (12), Kazakhstan (10), Kyrgyzstan (10), Russia (38)*, Tajikistan (396), Türkiye (81), Ukraine (6), United Kingdom (45), and Uzbekistan (8). According to the same report in the EU/EEA, 100 confirmed cases were reported in Austria (1), Belgium (11), Bulgaria (1), Finland (1), France (20), Germany (15), Greece (1), Ireland (6), Italy (9), the Netherlands (1), Norway (1), Poland (24), Romania (5) and Sweden (4). *Please note that numbers provided to WHO for EU/EEA countries are from TESSy data.*

**two cases reported in November 2022.*

According to a report by WHO Regional Office for Africa (AFRO), as of 27 November 2022 (week 48), cases and outbreaks of measles in 2022 were reported in the following countries: Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo (DRC), Ethiopia, Guinea, Kenya, Liberia, Mali, Niger, Senegal, Sierra Leone, South Africa, South Sudan, Tanzania, Zambia, Zimbabwe. As the reporting periods for the countries vary, please visit the latest weekly bulletin available here.

In the WHO Regional Office for Eastern Mediterranean (**EMRO**) from January to November 2022, 39 536 cases of measles were reported in all 21 countries of the Region. Most of the cases were reported in the following five countries: Somalia (15 823), Yemen (11 297), Pakistan (6 678), Afghanistan (3 527), Sudan (1 207). The update is provided from the WHO Provisional monthly measles and rubella data available on 18 October 2022.

In WHO Regional Office for South-East Asia (**SEARO**) from January to November 2022 there were 22 034 cases of measles reported by eight countries: India (17 909), Indonesia (3 671), Bangladesh (256), Thailand (99), Nepal (76), Myanmar (11), Timor-Leste (7), Bhutan (5). The update is provided from the WHO Provisional monthly measles and rubella data available on 18 October 2022. In addition, media has been reporting a large increase in measles cases in Mumbai, India.

ECDC assessment:

The substantial decline in measles cases reported by EU/EEA countries after March 2020, and continuing through 2022, 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 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 monitors 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.

4. Group A streptococcal infection - Multi-country - 2022

Update:

United Kingdom: On 15 December 2022, the UK Health Security Agency published an update reporting that an increase in scarlet fever cases in the United Kingdom is still being observed, but lower than during the pre-pandemic period. For week 48, 1 221 cases of scarlet fever were notified. However, a higher number of cases were recorded in the pre-pandemic period 2017-18 (1 988 notified cases).

A total of 836 iGAS cases have been notified this season, 213 in children under 18 years. Laboratory notifications of invasive Group A Streptococcal (iGAS) disease are higher than previously recorded rates during the same period over the last five seasons. During this season, the highest rate was observed among children from one to four years, followed by those aged 75 years and older. Of the total iGAS infections reported, 24% were registered in children aged 10 years or under, which is higher than range of proportions observed over the past five seasons (4% to 12%).

A total of 74 iGAS associated fatalities have been recorded within seven days of diagnosis. In all, 39% were among patients 75 years and above and 17% (n=12) were in children aged 10 years or younger.

iGAS isolate typing data indicate diverse *emm* gene sequence types: *emm*1 37%, *emm*12 17%, *emm* 89 5%. In children emm1 and emm12 were more dominant with 58% and 24% respectively. Antimicrobial susceptibility testing has shown universal susceptibility to penicillin and lower levels of resistance to tetracycline, erythromycin and clindamycin than last season.

Ireland: Since the previous update, no relevant epidemiological information has been reported.

Denmark: According to information communicated to ECDC, Denmark has a laboratory surveillance system for invasive cases of beta hemolytic streptococci, including Group A Streptococcus (GAS), with an estimated coverage of the 65% of the country.

At the beginning of 2020, there was a significant decline in GAS isolates; most probably connected to COVID-19 related restrictions. iGAS cases have remained low since then, although with a very modest increase during 2022. However, in November 2022 a sharp increase in iGAS cases was observed, accompanied by similar increases in three additional serogroups (Group B Streptococcus, Group C Streptococcus and Group G Streptococcus). The number of GAS isolates from patients aged 10 years or under has not shown an increasing trend. There does not seem to be a change in the distribution of *emm* types.

France: On 12 December 2022, Santé Publique France (SpF) published a news item stating that during the second half of November 2022 clinicians had detected a higher than usual number of iGAS cases in several regions of France (Occitanie, Auvergne-Rhône-Alpes, Nouvelle-Aquitaine) mainly in children under 10 years of age. The frequency of GAS infections was particularly low in 2020-21, probably in connection with the physical distancing measures in place for the COVID-19 pandemic. The strains circulating in France mainly belong to two known *emm* types (emm12 and emm1).

The Netherlands: On 14 December 2022, the Netherlands Institute for Health Services Research (NIVEL) published a weekly bulletin for week 49 based on the GP primary care surveillance system, and reported an increase in the number of strep throat/scarlet fever cases among children aged 0-4 years, but particularly in children aged 5-14 years compared to data from the previous three years.

Spain: According to information communicated to ECDC, GAS infections are not notifiable at national level. However, the Autonomous Communities of Valencia and Catalonia perform surveillance of GAS.

In 2022, no increase has been observed in GAS cases in the Autonomous Community of Valencia compared to previous years. In Catalonia, two cases of GAS were reported in 2019. Since then, no new cases of GAS have been reported in Catalonia.

The Autonomous Communities carried out an active search for cases and have reported 17 confirmed cases of GAS and iGAS infections (16 in the Community of Madrid and one in Andalusia). The cases were unrelated to each other, and aged between 10 months and 12 years, with symptom onset between 19 October and 4 December 2022. Sixteen of these cases were invasive GAS infections, two of which were fatal. However, at the moment there is not enough data available at national level to assess whether this number of cases represents an increase against what was expected.

US: On 7 December 2022, the US CDC published a notice indicating an investigation of a possible increase in invasive Group A Streptococcus in the United States among children.

Summary:

On 2 December 2022, the UK Health Security Agency (UK HSA) published a report on Group A streptococcal (GAS) infections in England, describing an early significant increase in scarlet fever notifications and GP consultations in the 2022 - 2023 season. The number of cases are above what is normally expected at this time of the year. The report additionally describes notifications of invasive group A streptococcus (iGAS) disease with a similar increasing trend, and a slightly higher than expected number of cases during the current season. The UK HSA also published a press release on 2 December 2022, reporting five deaths among children under 10 years recorded within seven days of iGAS diagnosis this season.

On 6 December, media reported a total of nine deaths in the UK (England, Wales and North Ireland) and in addition a statement by the Education Minister that antibiotics could be distributed to schools reporting Strep A infections.

On 6 December, Santé Publique France (SpF) published a status update reporting an increase in the number of iGAS infections in France since the beginning of 2022 in different regions (Occitanie, Auvergne-Rhône-Alpes, Nouvelle-Aquitaine), mainly in children under 10 years of age. The update informed also about the new active surveillance which is being developed to complement the microbiological monitoring of GAS in the country.

On 6 December, the Irish Health Protection Surveillance Centre (HPSC) published an update on the GAS situation in the country, stating that there had been a small increase in iGAS cases in Ireland since the beginning of October. In 2022, 55 iGAS cases have been notified to HPSC, 14 of these in children under 10 years of age. Twenty one of the 55 iGAS cases were reported in October 2022, and four of these cases were in children under 10 years of age.

Data reported from the Netherlands for the period between March and July 2022 indicated increased numbers of iGAS infections caused by diverse emm types.

ECDC assessment:

Group A streptococcus (GAS) is considered the most common cause of bacterial pharyngitis in school-aged children and may also affect their younger siblings. 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) helps control transmission within these settings.

iGAS infections are rare life-threatening infections complicating simple scarlet fever or pharyngitis. Children recovering from varicella (chickenpox) are at higher risk of developing iGAS infection.

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

Although investigations are ongoing, early typing data suggests that the surge of cases is not related to a specific or new strain or an increase in antibiotic resistance of GAS. Countries experiencing an increased number of cases are encouraged to share any emm-typing, M-typing, MLST, and/or WGS data via the related EpiPulse event page.

Actions:

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

ECDC in collaboration with the WHO Regional Office for Europe have issued a news item advising countries to maintain vigilance about increases of GAS and iGAS infections and increase awareness among healthcare professionals and parents of young children.

ECDC continues monitoring this event through Epidemic Intelligence activities and will report when relevant epidemiological updates are available.

5. Cluster of serogroup B invasive meningococcal disease (IMD) in Strasbourg - France - 2022

Overview:

Summary: On 12 December 2022, the French public health authorities informed that a cluster of four cases of serogroup B invasive meningococcal disease (IMD) were found in young adults in Strasbourg between 1 November 2022 and 28 November 2022. Further investigation found that all case patients had visited the same night club in Strasbourg in the days prior to their hospitalisation, and there was no direct contact between the four case patients. One death was reported. Chemoprophylaxis was recommended for close contacts according to French guidelines for management of IMD.

Whole genome sequencing conducted at the National Reference Centre (NRC) for Meningococci showed that three cases were caused by the same MenB clone belonging to clonal complex 269. For the fourth case, partial typing data showed an non-distinguishable strain. The NRC confirmed that the strain was covered by Bexsero and predicted to be covered by Trumenba meningococcal Group B vaccines.

On 7 December, the local health authority (Agence régionale de santé) launched a vaccination campaign using MenB vaccines targeting the staff and clients regularly visiting the night club where the cases were exposed. The vaccination campaign will be extended to all individuals aged 20-35 years old who regularly visit bars and night clubs in the centre of Strasbourg.

ECDC assessment:

This is a clonal outbreak of meningococcal Group B with four invasive cases found to be associated with a night club. The occurrence of additional cases among other visitors of the night club cannot be excluded. While transmission appears to be limited at this stage with all cases related to the same night club, further spread at nightclubs in Strasbourg is possible. The local vaccination campaign for eligible individuals will reduce the direct risk of invasive disease after complete vaccination. While the risk is considered to be low for people visiting Strasbourg, an increase in the number of foreign visitors is expected in the coming weeks.

IMD is a severe condition which can be vaccine preventable. Ongoing surveillance including molecular surveillance as well as vaccine coverage and antibiotic susceptibility testing is essential to inform implementation of prevention and control measures. Once a case is detected, contact tracing and administration of chemoprophylaxis to close contacts is important to reduce the risk of clusters. In addition, efforts should be made to ensure that all eligible individuals receive vaccination. Several vaccines targeting several serogroups are available for the prevention of IMD. The information on case vaccination status should be collected, including specific information about which serogroup/s the different meningococcal vaccines was indicated for.

Preventive action such as vaccination is the most effective way to prevent IMD and its consequences. Additional actions include early detection, isolation and management of suspected meningitis cases, identification of close contacts of cases and provision of chemoprophylaxis and monitoring of close contacts for clinical symptoms for at least ten days from latest possible exposure.

ECDC has published a factsheet on meningococcal disease where recommended case management and treatment is described. An ECDC Expert Opinion on the introduction of the meningococcal B (4CMenB) vaccine in the EU/EEA, is also available online.

Actions:

ECDC is monitoring the epidemiological situation through epidemic intelligence activities and will update again should relevant epidemiological updates become available.

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 has stopped 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. The Emergency Committee under the International Health Regulations (2005) stated that the risk of the international spread of poliovirus remains a Public Health Emergency of International Concern (PHEIC). On 12 October 2022, the 33rd meeting of the Emergency Committee was held under the International Health Regulations (2005) (IHR) on the international spread of poliovirus.

In June 2002, WHO's European Region was officially declared polio-free.

Update:

Since the 15 November 2022 and as of 13 December 2022, the following cases have been reported:

Wild poliovirus (WPV1):

- No new cases of AFP caused by WPV1 have been reported.

Circulating vaccine-derived poliovirus (cVDPV):

- Six new cases of AFP caused by cVDPV1 have been reported from Madagascar (3), Mozambique (2), and the Democratic Republic of the Congo (DRC) (1).
- Forty-three new cases of AFP caused by cVDPV2 have been reported in 2022 from ten countries: DRC (22), Chad (4), Yemen (4), Nigeria (4), Benin (3), Niger (2), Ethiopia (1)*, Ghana (1), Indonesia (1)*, and Togo (1).
- No new cases of AFP caused by cVDPV3 have been reported.

**new country since the previous report.*

Summary:

Wild poliovirus:
In 2022, and as of 13 December 2022, 30 cases of AFP caused by WPV1 have been reported. These have been reported from the two endemic countries, Pakistan (20) and Afghanistan (2), and one non-endemic country, Mozambique (8). One associated death has been reported in Pakistan.

Circulating vaccine-derived poliovirus (cVDPV):
In 2022, and as of 13 December 2022, 82 cases of AFP caused by cVDPV1 have been reported from DRC (48), Mozambique (18), Madagascar (13), and Malawi (3).

Overall, 476 cases of AFP caused by cVDPV2 have been reported from 16 countries: DRC (210), Yemen (158), Nigeria (42), Chad (22), Niger (13), Benin (10), Mozambique (4), Somalia (4), Central African Republic (3), Ghana (3), Togo (2), Algeria (1), Ethiopia (1), Eritrea (1), Indonesia (1), and USA (1).

One case of AFP caused by cVDPV3 has been reported from Israel.

Sources: Global Polio Eradication Initiative | ECDC | ECDC Polio interactive map | WHO DON | 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. Two EU/EEA countries (Poland and Romania) and one neighbouring country (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 from the September 2021 assessment, referring to data from 2020. According to the same report, 11 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, show that there is still a risk of the disease being imported into the EU/EEA. Furthermore, the worrying occurrence of outbreaks of circulating vaccine-derived poliovirus (cVDPV),

which emerges and circulates due to lack of polio immunity in the population, shows 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 or long-term visitors (>4 weeks) in 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 provides updates on the polio situation on a monthly basis. The Agency 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 an interactive map showing countries that are still endemic for polio and that have ongoing outbreaks of cVDPV.

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

Overview:

Week 49/2022 (05 December – 11 December 2022)

- The percentage of sentinel primary care specimens from patients presenting with ILI or ARI symptoms that tested positive for an influenza virus remained above the epidemic threshold (10%) and increased to 23% from 22% in the previous week.
- Influenza activity is increasing across the Region, with 27 countries reporting widespread activity and/or medium to very-high intensity.
- Georgia, Germany, Italy, Kyrgyzstan, Lithuania, Portugal and Slovakia reported seasonal influenza activity above 40% positivity in sentinel primary care.
- Both influenza type A and type B viruses have been detected, with A(H3) viruses being dominant in sentinel surveillance systems but with A(H1)pdm09 viruses dominating in non-sentinel surveillance systems.
- Hospitalised patients with confirmed influenza virus infection were reported from ICU wards, other wards and SARI surveillance. Infections due to type A viruses dominated. Among 126 SARI cases, 17% were due to A(H3) and 57% due to A(H1)pdm09. The proportion of infections due to type A viruses continued to increase. This trend is driven largely by countries in the Eastern part of the region, in which the proportion of type B viruses is decreasing.
- When comparing the different influenza type distributions by system, it is important to consider that different sets of countries report to each system.

Source: Flu News Europe

ECDC assessment:

Seasonal influenza activity is increasing, with sentinel positivity for influenza virus detections above 10% for minimum 10 tested specimens in the following countries: Slovakia (75%), Germany (56%), Lithuania (50%), Portugal (50%), Kyrgyzstan (47%), Georgia (45%), Italy (42%), France (32%), Czechia (30%), Netherlands (29%), Republic of Moldova (29%), Israel (28%), Ukraine (26%), Spain (26%), Luxembourg (25%), Poland (23%), Switzerland (22%), Slovenia (22%), Russian Federation (18%), Bulgaria (15%), Ireland (14%) and Norway (13%).

Actions:

ECDC and WHO monitor influenza activity in the WHO European Region. Data are available on the **Flu News Europe** website.

8. Mass gathering monitoring - the FIFA World Cup 2022 Qatar

Overview:

The 2022 FIFA World Cup is taking place between 20 November and 18 December 2022 in Qatar. Thirty-two countries are participating in this event, including nine EU Member States: Belgium, Croatia, Denmark, France, Germany, the Netherlands, Poland, Portugal, and Spain. A total of 64 matches will take place in eight stadiums spread across five Qatari cities. It is expected that approximately **1.5 million** football fans from around the world will travel to Qatar during this event, some of them staying outside of the country. The **FIFA Fan Festival** will take place at the Al Bidda Park in Doha, and will be open every day of the tournament from 19 November to 18 December.

Since the last update and as of 15 December 2022, ECDC and networking partners have detected two local events in Qatar related to the World Cup through epidemic intelligence activities.

On 15 December 2022, the media reported three French football players became sick with respiratory symptoms (fever, sore throat, feeling unwell).

On 12 and 13 December 2022 there was an increase in media reporting, mentioning the deaths of three journalists at FIFA Qatar 2022, two of whom died within 48 hours (media 1, media 2, media 3). The official cause of death is unknown for two of the journalists and one died of an aortic aneurism (media 4).

Below we provide a short epidemiological summary related to global or regional public health threats from infectious diseases:

COVID-19: Since the beginning of the pandemic, and as of 15 December 2022, the **Qatar Ministry of Public Health** has reported 485 781 SARS-CoV-2 positive cases including 685 deaths. Qatar has a relatively high vaccination rate for COVID-19, with 98.86% of eligible individuals fully vaccinated with the primary series (**Qatar MoPH**, **WHO**). Since 1 November 2022, visitors have no longer been required to present a negative COVID-19 PCR or rapid antigen test result before travelling to Qatar.

MERS-CoV: three retrospective cases of MERS-CoV were reported in Qatar in 2017 (WHO). In 2022 overall, there were two cases of MERS-CoV reported in Qatar (one in March and one in October), and since 2012 there have been 28 cases (including the recently reported three retrospective cases). Overall, globally 2 600 cases of MERS-CoV have been reported since 2012, with most of the cases reported in Saudi Arabia.
Mpox: No new cases have been reported in Qatar since September 2022. Overall, five cases of mpox have been reported in Qatar in 2022, and the first case was imported.

ECDC assessment:

As is often the case with mass gathering events, during the 2022 FIFA World Cup in Qatar, visitors may be most at risk of gastrointestinal illnesses and vaccine-preventable infections. Thus, travellers from the EU/EEA going to the event are advised to be vaccinated according to their national immunisation programme, and to ensure that they are vaccinated against seasonal influenza and have taken updated boosters for COVID-19, as recommended by respective national authorities. The following are recommended: employing standard hygiene measures, including regular handwashing with soap; drinking safe water (bottled, chlorinated or boiled before consumption); eating thoroughly cooked food and carefully washing fruits and vegetables with safe drinking water before consumption; and staying at home or in a hotel room when sick. The risk for EU/EEA citizens of becoming infected with communicable diseases during the 2022 FIFA World Cup in Qatar is considered low if travellers observe the suggested measures before, during, and after the event.

Actions:

ECDC's epidemic intelligence team is monitoring this event in collaboration with global partners between 14 November and 22 December 2022.

9. Ebola virus disease due to Sudan ebolavirus – Uganda – 2022

Overview: Since the last update on 9 December and as of 15 December 2022, no new cases of Sudan virus disease (SVD) have been reported.

According to the World Health Organization (WHO), as of 13 December 2022, there have been 142 confirmed cases of SVD, of which 55 died (CFR: 39%), and 87 recovered. In addition, 22 deaths among probable cases have been **reported** in individuals who died before a sample was taken. At least 19 healthcare workers have been infected and seven of them have died.

There are currently six contacts actively being followed up in Kassanda.

The last reported case was a stillborn 32-week-old male delivered on 27 November 2022 to a woman who survived SVD late in her pregnancy. This case was confirmed after a period of 13 days with no confirmed cases.

As of **5 December 2022**, there are 36 active contacts under follow-up across four districts, with a follow-up rate of 100%. A total of 4 754 contacts of cases have been identified across 15 districts.

Overall, there have been nine Ugandan districts affected by this outbreak: Bunyangabu, Jinja, Kagadi, Kampala, Kassanda, Kyegegwa, Masaka, Mubende, and Wakiso. Bunyangabu, Kagadi, Kyegegwa and Masaka have completed two incubation cycles of the virus without reporting any cases.

Background: On 20 September 2022, the Ministry of Health in Uganda, together with the World Health Organization's Regional Office for Africa, confirmed an outbreak of SVD in Mubende District, Uganda, after one fatal case was confirmed.

The index case was a 24-year-old man, a resident of Ngabano village in the Madudu sub-county in Mubende District. The patient experienced high fever, diarrhoea, abdominal pain, and began vomiting blood on 11 September 2022. Samples were collected on 17 September 2022 and SVD was laboratory-confirmed on 19 September. The patient died on the same day, five days after hospitalisation.

On 15 October 2022, the **President of Uganda** imposed a 21-day lockdown on the Mubende and Kassanda districts to contain the outbreak. Measures included an overnight curfew, closing places of worship and entertainment, and restricting movement in and out of the two districts. These measures were extended on 5 November 2022 and again on 26 November, until 17 December 2022.

The Ugandan government is carrying out community-based surveillance and active case finding. An on-site **mobile laboratory** has been established in Mubende and risk communication activities are ongoing in all affected districts. Africa CDC, WHO, GOARN and other partners have teams in Uganda to support the coordination of the response.

As of **16 November 2022**, all travellers leaving or arriving at Entebbe International Airport in Uganda are required to complete a health declaration form.

On 8 December 2020, the **Ministry of Health of Uganda** announced that 1 200 doses of vaccine have arrived in the country which will be used in the Tokomeza Ebola vaccine trial. This is the first batch of one of three vaccine candidates. According to the **Sabin Vaccine Institute**, the doses that have arrived are Sabin's vaccine and they will make another 8 500 doses available to WHO on a rolling basis through January.

SVD outbreaks have previously occurred in Uganda (four outbreaks) and Sudan (three outbreaks). The last SVD outbreak in Uganda was in 2012.

ECDC assessment:

Risk to EU/EEA citizens living in or travelling to affected areas in Uganda

The current probability that EU/EEA citizens living in or travelling to SVD-affected areas of Uganda will be exposed to the virus is very low, provided that they adhere to the recommended precautionary measures. Transmission requires direct contact with blood, secretions, organs or other bodily fluids of dead or living infected people or animals; all of which are unlikely for EU/EEA tourists or expatriates in Uganda.

Given that infection with Sudan ebolavirus leads to severe disease but that the probability of exposure for EU/EEA citizens is very low, the impact for EU/EEA citizens living and travelling in affected areas of Uganda is considered low. Overall, the current risk for EU/EEA citizens living in or travelling to affected areas in Uganda is considered low.

Risk of introduction and spread within the EU/EEA

The most likely route by which the virus could be introduced to the EU/EEA is through infected people from affected areas travelling to the EU/EEA or medical evacuation of cases to the EU/EEA. According to the International Air Transport Association (IATA), in 2019, there were about 126 000 travellers arriving in the EU/EEA

from Uganda. Based on experience from the largest Ebola disease outbreak in West Africa to date (2013–2016, due to Zaire ebolavirus), where thousands of cases were reported, with transmission in large urban centres, and the deployment of hundreds of EU/EEA humanitarian and military personnel to the affected areas, importation of cases by travellers is considered unlikely.

The likelihood of secondary transmission of Sudan ebolavirus within the EU/EEA and the implementation of sustained chains of transmission within the EU/EEA is very low, as cases will be promptly identified and isolated, with follow-up control measures implemented. During the large Ebola disease outbreak in West Africa in 2013–2016, there was only one local transmission in the EU/EEA (in Spain), in a healthcare worker who had cared for an evacuated patient. The impact of SVD for EU/EEA citizens living in the EU/EEA is considered low, and overall the current risk of SVD for the citizens in the EU/EEA is considered very low.

Actions:

ECDC is monitoring this situation through its epidemic intelligence activities, and will report relevant updates weekly. On 12 October 2022, ECDC published a **news item** on the Ebola outbreak in Uganda. ECDC provides a weekly epidemiological update on the outbreak on its **website**. On 3 November 2022, ECDC deployed an expert to Uganda to support the DG ECHO country office and the overall outbreak response.
ECDC published a rapid risk assessment, 'Risk of Sudan virus to EU/EEA citizens considered very low', on 9 November 2022.

Further information:

EU/EEA visitors and residents in affected areas in Uganda should observe the following precautionary measures:

- Avoid contact with symptomatic patients/their bodily fluids, bodies and/or bodily fluids from deceased patients.
- Avoid consumption of bush meat and contact with wild animals, both alive and dead.
- Wash and peel fruits and vegetables before consumption.
- Wash hands regularly using soap or antiseptics.
- Ensure safe sexual practices.

ECDC considers that the screening of travellers returning from Uganda would not be an effective measure to prevent introduction of the disease in Europe. Screening incoming travellers is time- and resource-consuming and will not effectively identify infected cases. Both experience and evidence show that exit screening from affected regions/countries can be an effective measure to support the containment of disease spread.

WHO advises against any restrictions on travel and/or trade to/with Uganda based on available information for the current outbreak.

The licensed vaccines available protect against Ebola disease resulting from Zaire ebolavirus. There are no licensed vaccines against SVD, and there are no available data on the level of cross-protections. The availability of a vaccine was proven to be very helpful in the control of the recent outbreaks in the Democratic Republic of the Congo. The unavailability of vaccines is an additional challenge in the control of this outbreak.

Sources: **Ministry of Health Uganda** , **Africa CDC**, **WHO**.

Maps and graphs

Figure 1. Ebola disease cases reported in Uganda in 2022, by week of reporting

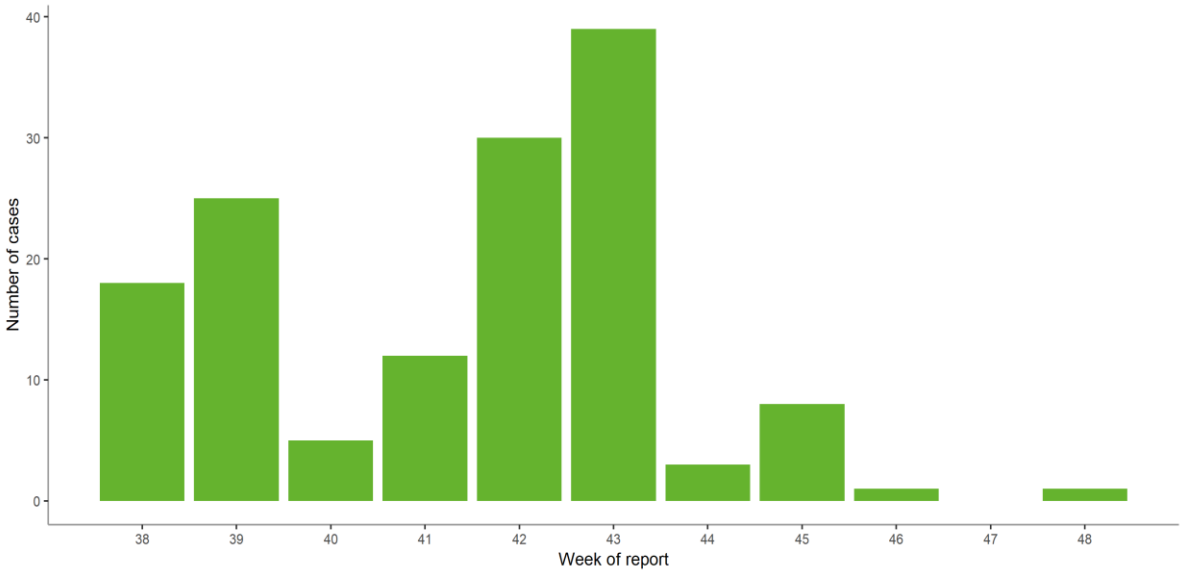

Figure 2. Geographical distribution of EVD cases in Uganda, 2022