WEEKLY BULLETIN

Communicable Disease Threats Report

Week 47, 19–25 November 2023

Today's disease topics

1. Overview of respiratory virus epidemiology in the EU/EEA
2. SARS-CoV-2 variant classification
3. Increase of paediatric respiratory infections – China – 2023
4. Avian influenza in fur farms – Finland – 2023
5. West Nile virus One Health seasonal surveillance – 2023
6. Cholera – Multi-country (World) – Monitoring global outbreaks

Executive Summary

Overview of respiratory virus epidemiology in the EU/EEA

- By the end of week 46 (ending 19 November 2023), rates of respiratory illness (influenza-like illness (ILI) and/or acute respiratory infection (ARI)) in the community were increasing in many EU/EEA countries as expected for this time of the year. Rates of severe acute respiratory infection (SARI) cases presenting to secondary care were comparable to the same time last year.
- SARS-CoV-2 continued to circulate at higher levels than seasonal influenza and respiratory syncytial virus (RSV). Countries reported a mix of increasing and decreasing trends for SARS-CoV-2 activity and severity, with countries in the south of EU/EEA mostly in a decreasing trend while the countries in the north are in an increasing trend. Severity indicators, hospital admission, intensive care unit (ICU), and death rates continued to show an increase, especially in the 65 years and above age group. RSV activity continued to increase, with the highest impact among children aged 0–4 years. Seasonal influenza activity remained at a low level, although there is evidence of increasing intensity and geographical spread in some countries.

SARS-CoV-2 variant classification

- Since the last update on 17 November 2023, and as of 24 November 2023, ECDC classified the **BA.2.86** lineage as variant of interest (VOI). The reasons for this classification are its large number of genetic changes relative to its ancestral BA.2 and currently circulating XBB-derived variants, and an increasing trend in the proportion of this variant detected in several EU/EEA countries. BA.2.86 has so far not been associated with any concerning properties in terms of transmissibility, immune escape or infection severity, when compared to currently circulating

XBB-derived variants. While there is no evidence of BA.2.86 currently impacting epidemiological indicators, this may change in the coming weeks if variant detections continue to increase at the current pace. BA.2.86 is circulating with a median proportion of 9.6% in EU/EEA countries (range: 3–73%).

- **XBB.1.5-like+F456L** variants currently dominate the global and EU/EEA SARS-CoV-2 variant landscape. As of 20 November 2023, for week 44 (30 October 2023 to 5 November 2023), XBB.1.5-like lineages are circulating with a median proportion of 68% in EU/EEA countries (range: 23–83%). The overall proportion of XBB.1.5-like+F456L lineages levelled off in the EU/EEA, with stable trends observed over the past few weeks.
- **XBB.1.5-like+L455F+F456L** variants show an increasing trend in all EU/EEA countries with sufficient reporting, with a median proportion of 39% (range: 6–55%). The lineages mainly present in this umbrella are HK.3 lineages and GK* lineages.

Increase of paediatric respiratory infections – China – 2023

- On 23 November 2023, the World Health Organization (WHO) published a Disease Outbreak News (DON) item providing clarifications on media reports (ProMed) about clusters of undiagnosed pneumonia in school-aged children in the Beijing and Liaoning regions in China.
- Chinese authorities provided surveillance data and clarified that there has been no detection of any unusual or novel pathogens or unusual clinical presentations.
- Increase in respiratory infections in the paediatric population is not unexpected during winter months in temperate regions of the world, due to several seasonal pathogens such as RSV, influenza, adenoviruses, SARS-CoV-2 and *Mycoplasma pneumoniae,* among others.

Avian influenza in fur farms – Finland – 2023

- Since 13 September 2023 and as of 17 November 2023, avian influenza A(H5N1) virus has been detected in 56 fur farms in the Ostrobothnia and Satakunta regions of Finland.
- Avian influenza virus was detected in 3 of 111 mink farms and in 10 of 38 fox and racoon dog farms.
- To date, no human cases have been detected among farm workers and their close contacts.
- The introduction of avian influenza into fur farms is not unexpected. Similar events have been observed in the past. Transmission between foxes and other infected mammals and humans has not been observed so far. It is crucial to identify infected mammals and exposed people. According to the Finnish Institute for Health and Welfare (THL), exposed individuals should be monitored for 10–14 days and tested if symptoms occur.
- ECDC assesses the current risk of infection for the general population as low and the risk of infection for people who are occupationally or otherwise exposed to avian influenza virus-infected animals as low-to-moderate.

West Nile virus One Health seasonal surveillance – 2023

- Since the last update, and as of 22 November 2023, four human cases of West Nile virus (WNV) infection have been reported by EU/EEA countries, and no cases were reported by any EU-neighbouring country.
- Since the beginning of the 2023 transmission season, 698 human cases of WNV infection have been reported by EU/EEA countries, and 93 by EU-neighbouring countries.
- Since the beginning of the 2023 WNV transmission season, and as of 22 November 2023, EU/EEA countries have reported 146 outbreaks among equids and 246 outbreaks among birds.

Cholera – Multi-country (World) – Monitoring global outbreaks

- Since 26 September 2023 and as of 31 October 2023, 53 327 new cholera cases, including 482 new deaths, have been reported worldwide.
- New cases have been reported from Afghanistan, Burundi, Cameroon, Democratic Republic of the Congo, Ethiopia, Haiti, Kenya, Malawi, Mozambique, Nigeria, Somalia, Sudan, Zambia and Zimbabwe.
- Cholera cases have continued to be reported in western, eastern and southern parts of Africa, some parts of the Middle East, South East Asia and the Americas in recent months. The risk of cholera infection in travellers visiting these countries remains low, even though sporadic importation of cases to the EU/EEA remains possible.

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

Overview:

Respiratory virus activity

- Consultation rates of patients presenting to general practitioners with respiratory illness (ILI and/or ARI) were reported by 23 EU/EEA countries up to week 46. Rates were increasing in multiple countries but remained at levels similar to those observed in the same period last year. Moving epidemic method (MEM) thresholds were available for nine countries for ARI and 20 countries for ILI. Among these countries, two showed medium

activity and one low activity for ARI, one reported medium and two low activity for ILI, and the remainder reported baseline activity.

- Among countries reporting data on testing in primary care sentinel settings for influenza, RSV or SARS-CoV-2, median test positivity at the EU/EEA level remained highest for SARS-CoV-2 at 21% (pooled country data: 19%; IQR of country values: 11–26%). An overall increasing trend in median SARS-CoV-2 positivity data has been observed since week 38, with heterogeneity observed in the countries. Median test positivity for seasonal influenza was 3% (pooled 6%, IQR: 1–5%) and for RSV 1% (pooled 4%, IQR: 0–8%). There was an increasing trend visible for both seasonal influenza and RSV (with influenza detections reported by 13 of 21 countries reporting tests and RSV detections reported by nine of 18 countries reporting tests).
- RSV detections in non-sentinel data reported by 15 countries continued to increase in recent weeks. An increasing trend was observed for seasonal influenza detections over the past four weeks even though this week's data show a slight decrease, possibly due to a reporting delay. Influenza detections remain at low levels overall. SARS-CoV-2 detections in non-sentinel data were similar to those reported for sentinel data, with a mixture of increasing and decreasing trends at the country level.
- Among the 153 sentinel detections of seasonal influenza, 150 were typed as influenza virus type A and three were typed as influenza virus type B. Forty-three of the influenza type A detections were further subtyped as either A(H1)pdm09 (n = 30) or A(H3) (n = 13).
- Qualitative indicators are currently only reported for seasonal influenza. Of the 24 countries reporting influenza intensity, 15 countries reported baseline, four countries reported low, and five countries reported medium levels of activity. Of 23 countries reporting the geographical spread of influenza, six countries reported no activity, 12 reported sporadic activity, one reported local, two reported regional, and two reported widespread activity. The change from last week suggests increasing geographical spread in some countries.

Severe disease

- Increases in pooled SARI SARS-CoV-2 positivity have been observed since week 29 in people aged 15–64 years and 65 years and above, with a mixed picture at the country level. Non-sentinel hospital admissions and ICU and death rates have continued to increase, especially in the 65 years and above age group.
- In recent weeks, increasing trends in RSV positivity were observed in four of five countries reporting RSV data from SARI systems for week 46, with the highest positivity (42%) in the 0–4 years age group. However, increases were also observed in other age groups (rising to 11% in 5–14 years and 2% in 65 years and above). Non-sentinel RSV hospital admissions also remained high in the 0–4-years age group, based on data from three countries.
- Pooled test positivity for seasonal influenza in sentinel SARI system has increased from one to two percent since last week and an increase is observed in the people aged 15–64 years and 65 years and above. Non-sentinel hospital admissions, ICU, and death indicators for influenza remain low.

Virus characterisation

SARS-CoV-2 variants for weeks 44–45 (30 October to 12 November 2023)

- The estimated distribution (median and IQR of proportions from 13 countries) of variants of concern (VOCs) or variants of interest (VOIs) was 65% (61–71%) for XBB.1.5+F456L, 11% (6–15%) for XBB.1.5, 11% (8–15%) for BA.2, and 1% (0–2%) for BA.2.75. The proportion of BA.2 (most of which is due to BA.2.86) had been growing, XBB.1.5-like+F456L had plateaued, and XBB.1.5 showed a steady decreasing trend.

Period overview (week 25, 2023 to week 46, 2023)

- Following relatively low respiratory illness activity over the summer period, consultation rates have been increasing in primary care settings since September. Transmission of SARS-CoV-2 began increasing in the late summer and continues to show an increase based on the sentinel median positivity data as well as severity indicators, hospital admission, ICU, and death rates. The impact of SARS-CoV-2 on severe disease is mainly affecting those aged 65 years and above. RSV activity began in around week 36 and has been increasing since, resulting in increasing hospital admissions particularly among the 0–4-years age group. This increase appears to have occurred around four weeks later than last year. Influenza activity remained low but is recently increasing.

ECDC assessment:

SARS-CoV-2 continued to circulate at higher levels than respiratory syncytial virus (RSV) and seasonal influenza. Countries reported a mix of increasing and decreasing trends for SARS-CoV-2 activity and severity. RSV activity continued to increase, with the highest impact among children aged 0–4 years. Seasonal influenza activity remained at a low level, although there is evidence of increasing geographical spread in some countries.

Actions:

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

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

Sources: ERVISS

Last time this event was included in the CDTR: 20 November 2023

2. SARS-CoV-2 variant classification

Overview:

Weekly update on SARS-CoV-2 variants:
Since the last update on 17 November 2023, and as of 24 November 2023, ECDC classified **BA.2.86** as variant of interest (VOI). The reason for this classification is the distinct genetic properties and increasing trend in proportions in several EU/EEA countries. BA.2.86 has so far not been associated with any concerning properties in terms of transmissibility, immune escape or infection severity. It is still unclear whether the presence of BA.2.86 will have any significant impact on epidemiological indicators. For now, the impact seems low, but this may change in the coming weeks if the variant keeps increasing at the current pace.

BA.2.86 was first detected in mid-August 2023 and is genetically very divergent from other currently circulating variants. BA.2.86 is characterised by several changes in the receptor-binding domain of the spike protein (I332V, D339H, R403K, V445H, G446S, N450D, L452W, N481K, 483del, E484K, and F486P). Several sublineages of BA.2.86 emerged, acquiring further mutations within the spike protein and in the wider genome, including JN.1 (BA.2.86.1.1) acquiring spike mutation L455S, and JQ.1 (BA.2.86.3.1.1) with spike T95I. In the past weeks, mainly BA.2.86.1 and its sublineages JN* are circulating both within and outside EU/EEA countries.

Among the 12 EU/EEA countries reporting at least 10 sequences to GISAID EpiCoV for week 44 (30 October to 5 November 2023), the proportions of BA.2.86 lineages were as follows: Austria (8.7%), Belgium (13.3%), Denmark (9.0%), France (14.1%), Germany (4.5%), Iceland (73.5%), Ireland (9.6%), Italy (6.9%), Netherlands (3.1%), Poland (3.2%), Spain (22.7%) and Sweden (11.8%). The overall trend for the variant proportion is increasing (Figure 2). Please note that the high proportions in Iceland can be attributed to a low number of total reported sequences (n = 34 for week 44).

Outside EU/EEA countries, an increasing trend has been detected in Australia (8.4%), Canada (3.3%), Japan (10%), Singapore (5%), Switzerland (14%), the United Kingdom (14%) and the United States (3.8%).

The variant proportions listed below are reported for week 44, 2023 (30 October 2023 to 5 November 2023).

XBB.1.5-like+F456L lineages currently dominate the global and EU/EEA SARS-CoV-2 variant landscape. As of 17 November 2023, XBB.1.5-like lineages are circulating in a median proportion of 68% in EU/EEA countries (range: 23–83%). The overall proportion of XBB.1.5-like+F456L lineages levelled off in the EU/EEA, with stable trends observed over the past few weeks.

XBB.1.5-like+L455F+F456L variants show an increasing trend in all countries in EU/EEA with sufficient reporting, with a median proportion of 39% (range: 6–55%). The lineages mainly present in this umbrella are HK.3 lineages and GK* lineages. Preliminary studies indicate that XBB.1.5-like+L455F+F456L variants may bind more efficiently to human ACE-2 and have similar immune evasive properties compared to XBB.1.5-like+F456L variants and XBB.1.5-like+L455F variants. Virtually all of the lineages are already included in the existing VOIs XBB.1.5-like+F456L but are being monitored specifically as VUMs.

The combination of these mutations (L455F and F456L) has also been increasing in BA.2.75 lineages. The **DV.7.1** variants that carry these mutations have been detected more frequently and are circulating at a median proportion of 1% in the EU/EEA (range: 0–5%).

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

ECDC assessment:

As of 24 November 2023, ECDC classified the BA.2.86 lineage as a variant of interest (VOI). The reasons for this classification are its large number of genetic changes relative to its ancestral BA.2 and currently circulating XBB-derived variants, and an increasing trend in the proportion of this variant detected in several EU/EEA countries. BA.2.86 has so far not been associated with any concerning properties in terms of transmissibility, immune escape or infection severity, when compared to currently circulating XBB-derived variants. While there is no evidence of BA.2.86 currently impacting epidemiological indicators, this may change in the coming weeks if variant detections continue to increase at the current pace.

Across the EU/EEA, the vast majority of the population has developed hybrid immunity through a combination of vaccination and at least one prior infection. Pseudovirus neutralisation studies for BA.2.86 show that serum from individuals with hybrid immunity—particularly following booster vaccination and infection with recent XXB-derived variants—is able to effectively neutralise BA.2.86 in vitro, indicating that a combination of hybrid immunity coupled with recent infection confers some protection against BA.2.86 infection [1, 2, 3]. Furthermore, serum from individuals receiving the monovalent XBB.1.5-targeted COVID-19 vaccine has been shown to exhibit strong neutralising activity against BA.2.86 pseudoviruses in vitro, indicating that these updated vaccines confer additional protection [4].

There is no evidence to date indicating that BA.2.86 variants are associated with any increase in infection severity compared to circulating XBB-derived variants, and there are no indications of healthcare system compromise in EU/EEA countries linked to increasing BA.2.86 detections. There is currently no evidence of a reduction in vaccine effectiveness against severe disease for BA.2.86; however, as with other currently circulating variants, older individuals and those with underlying conditions remain at increased risk of severe outcomes, if infected.

Actions:

ECDC has created the following EpiPulse item to facilitate sharing of epidemiological and microbiological information from countries for BA.2.86: 2023-IRV-00009. In particular, countries are encouraged to share emerging evidence on BA.2.86 transmissibility, severity, immunological escape and vaccine effectiveness to support ongoing variant assessment.

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

Last time this event was included in the CDTR: 20 November 2023

Maps and graphs

Figure 1. Proportion of sequences belonging to BA.2.86 lineages per sample collection week, EU/EEA, as of 20 November 2023 (GISAID EpiCoV)

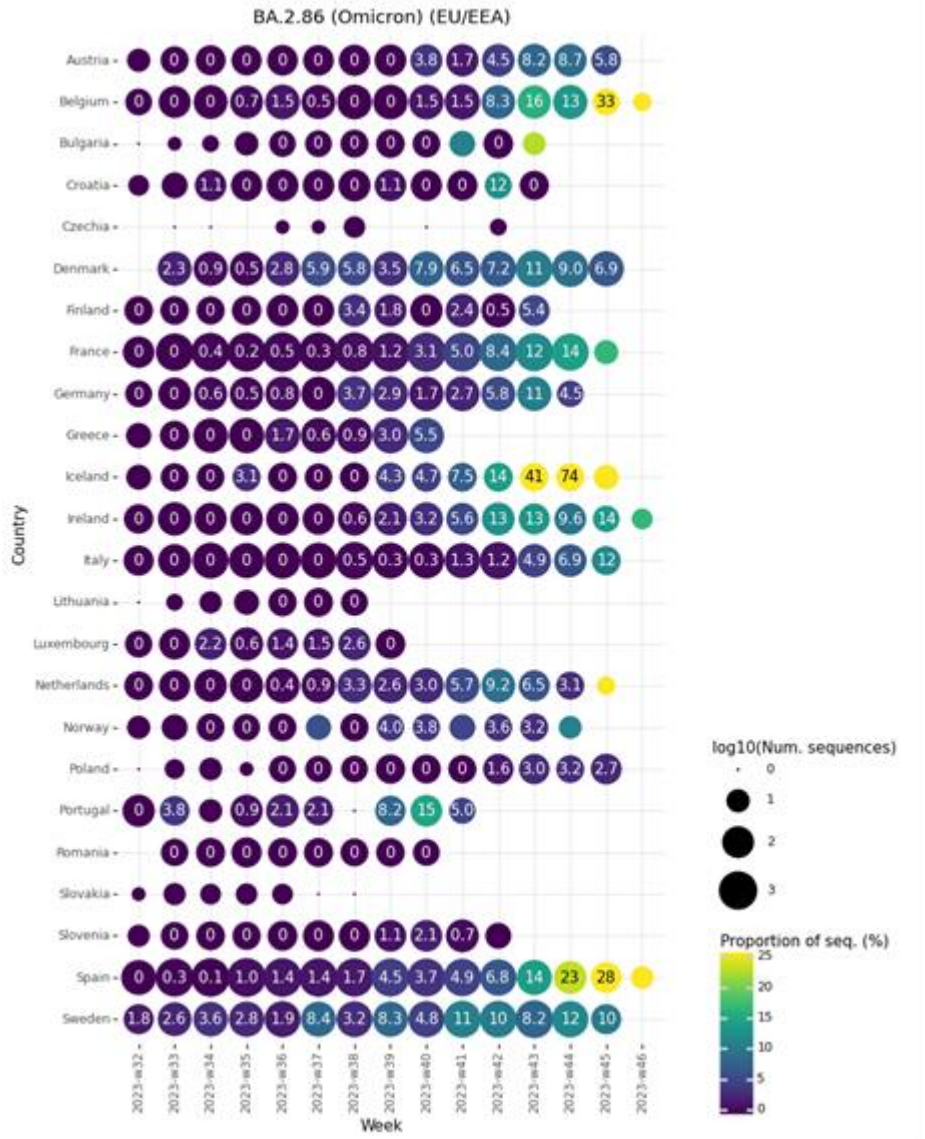
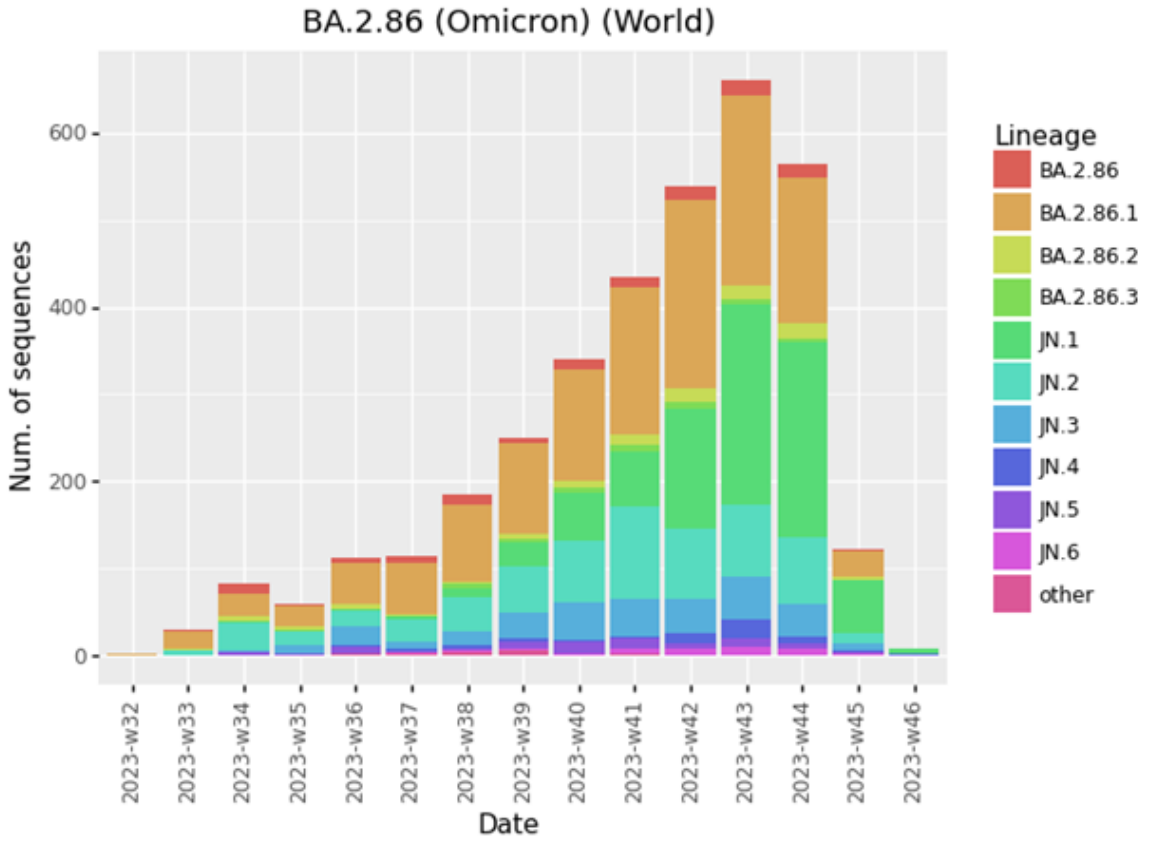


Figure 2. Distribution of BA.2.86 lineages per sample collection week, worldwide, as of 20 November 2023 (GISAID EpiCoV)



3. Increase of paediatric respiratory infections – China – 2023

Overview:

On 23 November 2023, the World Health Organization (WHO) published a Disease Outbreak News (DON) item providing clarifications on media reports (ProMed) about clusters of undiagnosed pneumonia in school-aged children in the Beijing and Liaoning regions in China. According to WHO DON, the pneumonia clusters mentioned by ProMed were part of the known general increase in respiratory illnesses in the community, which had been reported at a press conference on 13 November 2023 by China's National Health Commission.

The Chinese authorities reassured WHO in a teleconference held on 23 November, where they presented surveillance data. An increase in outpatient consultations and hospital admissions of children due to *Mycoplasma pneumoniae* has been detected in China since May, and due to RSV, adenovirus and influenza virus since October 2023. Some of these increases occurred earlier in the season than usual, but this is not unexpected given the lifting of COVID-19 restrictions, as has been experienced in other countries. No changes in the disease presentation were reported by the Chinese health authorities. Chinese authorities clarified that there has been no detection of any unusual or novel pathogens or unusual clinical presentations, including in Beijing and Liaoning, but only the aforementioned general increase in respiratory illnesses due to multiple known pathogens. They further stated that the rise in respiratory illnesses has not resulted in patient loads exceeding hospital capacities.

ECDC assessment:

An increase in respiratory infections in the paediatric population is not unexpected during winter months in temperate regions of the world, due to several seasonal pathogens such as RSV, influenza, adenoviruses, SARS-CoV-2 and *Mycoplasma pneumoniae.* EU/EEA countries and the United Kingdom are also reporting significant

increases in respiratory infections in the paediatric population (e.g. bronchiolitis in France). In South Korea, the KDCA has also recently reported an increase in infections in children due to *Mycoplasma pneumoniae*.

Actions:

ECDC received direct information from WHO and the China CDC to perform this assessment.

Last time this event was included in the CDTR: 22 November 2023

4. Avian influenza in fur farms – Finland – 2023

Overview:

Update

Between 13 September and 17 November 2023, avian influenza virus has been detected in 56 fur farms (an increase of 30 fur farms) in the Ostrobothnia and Satakunta regions of Finland.

To date, no human cases with avian influenza A(H5N1) virus infection have been detected among farm workers and their close contacts.

Avian influenza virus was detected in 3 of 111 mink farms and in 10 of 38 fox and racoon dog farms.

Summary

Since 13 September 2023 and as of 17 November 2023, avian influenza A(H5N1) virus has been detected in 56 fur farms in Finland, according to **updates by the Finnish Food Authority**. Most of the affected farms (n = 53) are in the region of Ostrobothnia, affecting areas of Alavieska, Halsua, Kaustinen, Evijärvi, Kalajoki, Kannus, Kauhava, Kristiinakaupunki, Kruunupyy, Lappajärvi, Mustasaari, Pedersöre, Pietarsaari, Pyhäjoki, Uusikaarlepyy, Veteli and Vöyri. Three farms detected avian influenza A(H5N1) virus in the Satakunta region, affecting areas of Eurajoki and Merikarvia. The affected fur farms host mainly foxes (blue, silver and mixed-breed), as well as raccoon dogs and mink.

On 3 November, the Finnish Food Authority reported that of the 111 mink farms tested earlier this autumn as part of the survey, avian influenza was detected in mink on three farms. Blood of the fur farm animals was tested using the ELISA method. Positive sample were then tested using the hemagglutinin inhibition method. In addition, on 10 November, the authority reported detection of avian influenza in 10 of the 38 investigated fur farms (of the 330 targeted for the survey) that hosted foxes and racoon dogs in the Ostrobothnia and Satakunta regions. More positive samples have been detected in fox and racoon dog farms than in mink farms. This suggests several hypotheses, such as possibly higher sensitivity of foxes to the virus than mink, that fox and racoon dog farms are less protected from birds than mink or that there have been more avian influenza infections in wild birds in the areas with infected fox farms.

On 21 July 2023, the Finnish Food Authority **reported** that, based on preliminary analysis, the lineage of the virus collected from the fur animals matches the lineage of the virus circulating among gulls, and there are indications that it has a mutation that promotes replication in mammalian cells. Sequences of the viruses collected from mink, foxes and seagulls in Finland have been posted in the **GISAID EpiFlu** database.

Virus **mutation** has been found in five fur farms.

At the beginning of September 2023, the **Finnish Food Authority** established a system for avian influenza monitoring at all fur farms in the country. In the first phase of monitoring, the presence of avian influenza was investigated in mink farms. In the second phase, monitoring and sampling of fox and racoon dog fur farms was implemented. Blood samples are being collected from dead animals (culled or those that died naturally) for antibody testing to detect avian influenza and SARS-CoV-2. The samples are being taken by municipal veterinarians and authorised samplers and examined by the Finnish Food Authority.

On 13 September 2023, the **Finnish Food Authority** ordered the euthanisation of all foxes and raccoon dogs in farms with confirmed avian influenza A(H5N1) virus. Orders had previously been issued to euthanise all mink at affected farms, whereas for foxes and raccoon dogs farms this was decided on a case-by-case basis.

Sequencing analyses of avian influenza virus isolated from fur farms suggest a possible spread from birds to animals, but also potentially between mammals at affected fur farms via contact through animal secretions, feed or contaminated bedding and care equipment. The laboratory investigation is ongoing.

The new orders concern 115 000 animals in Ostrobothnia, including 109 000 foxes and 6 000 raccoon dogs, affecting 11 farms where all animals have to be euthanised and five where some of the animals have to be euthanised. Ten more farms have not been closed yet. Previously, 135 000 animals were euthanised, including all farmed mink (50 000), foxes (79 000) and raccoon dogs (6 000) at infected farms.

According to the **Finnish Food Authority**, this is the first time avian influenza has been detected in farmed fur animals in Finland. Two infections were previously detected in wild foxes in Finland.

ECDC assessment:

The introduction of avian influenza into fur farms is not unexpected if infected wild birds are observed in the area and measures to prevent contact between infected birds or their droppings and the farmed animals are not in place. A previous **event** was observed at a mink farm in Spain. Transmission from foxes or other infected mammals to humans has not been observed to date.

ECDC assesses the current risk of infection to the general population as low and the risk of infection to people who are occupationally or otherwise exposed to avian influenza-infected animals as low-to-moderate.

People exposed to infected mammals should be monitored for 10–14 days, and testing should be initiated if symptoms occur. In addition, it is crucial to perform virus analyses and share sequence data from detections in animals for the analysis of markers relevant for mammalian adaptation.

Actions:

ECDC is following up with the Finnish authorities and other relevant agencies.

Further information:

The Finnish authorities have published **advice** for the general public on the prevention of avian influenza virus infections and issued **guidelines** for public health professionals, including recommendations for testing. ECDC's testing guidance on avian influenza viruses in humans is available on our **website**.

On 1 August 2023, the Finnish Food Authority published **criteria for culling fur animals** to prevent the spread of avian influenza.

On 8 August 2023, the Finnish Institute for Health and Welfare (THL) published a **statement** on how to stop the circulation of avian influenza in farmed fur animals and the use of personal protective equipment for farm workers.

Last time this event was included in the CDTR: 22 November 2023

5. West Nile virus One Health seasonal surveillance – 2023

Overview:

This is the 26th weekly update of the 2023 West Nile virus (WNV) monitoring season.

Since last week's update, and as of 22 November 2023, European Union (EU) and European Economic Area (EEA) countries reported four human cases of West Nile virus (WNV) infection. All cases were reported by France. EU-neighbouring countries reported no human cases of WNV infection.

Since the beginning of the 2023 transmission season and as of 22 November 2023, EU/EEA countries have reported 698 human cases of WNV infection in Italy (329), Greece (162, of which 1 with unknown place of infection), Romania (103), France (41), Hungary (29), Spain (17), Germany (6), Croatia (6) and Cyprus (5). EU/EEA countries have reported 64 deaths in Italy (26), Greece (23), Romania (12) and Spain (3). EU-neighbouring countries have reported 93 human cases of WNV infection in Serbia (91) and North Macedonia (2), and two deaths in Serbia.

During the current transmission season, within the reporting countries, autochthonous human cases of WNV infection were reported from 140 different NUTS 3 or GAUL 1 regions, of which the following regions reported autochthonous human cases of WNV infection for the first time ever: Charente, Charente-Maritime, Gironde, Haute-Corse and Alpes-Maritimes in France; Sömmerda in Germany; Kastoria and Ioannina in Greece; Cosenza, Bari, Salerno, Lecce, Verbano-Cusio-Ossola, Taranto and Imperia in Italy; Gorj and Timiş in Romania; and Cáceres, Huelva, Valencia/València, Barcelona and Toledo in Spain.

Since the beginning of the 2023 transmission season, 146 outbreaks among equids and 246 outbreaks among birds have been reported by EU/EEA countries. Outbreaks among equids have been reported by France (44), Spain (36), Hungary (26), Italy (23), Germany (14), Portugal (2) and Austria (1). Outbreaks among birds have been reported by Italy (195), Germany (19), Spain (19), Bulgaria (6), Hungary (3), France (2), Austria (1) and Greece (1).

Please refer to the **West Nile virus infection webpage** for maps and a dashboard.

Sources: The European Surveillance System (TESSy), Animal Disease Information System (ADIS)

ECDC assessment:

As the weather conditions have become less favourable for vector-borne transmission in most of the affected areas, the intensity of WNV circulation has decreased and is expected to decrease further in the coming weeks.

As of 22 November 2023, the most recent onset date reported was 26 October 2023.

In accordance with the **Commission Directive 2014/110/EU**, prospective blood donors should be deferred for 28 days after leaving a risk area for locally acquired WNV infection, unless the result of an individual nucleic acid test is negative.

Actions:

During the WNV transmission season, ECDC publishes a dashboard and an epidemiological summary every Friday.

Further information:

Data on human cases of WNV are collected via The European Surveillance System (TESSy), managed by ECDC. Imported cases are not included in this report. The following EU-neighbouring countries reported human cases of WNV infection to ECDC: Albania, Kosovo*, Montenegro, North Macedonia, Serbia and Türkiye.

Animal data (i.e. outbreaks among equids and birds) are collected through the Animal Disease Information System (ADIS) of the European Commission. Reporting of WNV in equids and birds is mandatory at the EU/EEA level.

The distribution of human infections covers EU/EEA and EU-neighbouring countries, whereas the distribution of outbreaks among equids and birds only relates to EU/EEA countries.

** This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo Declaration of Independence.*

Last time this event was included in the CDTR: 17 November 2023

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

Overview:

Data presented in this report originate from several sources, both official public health authorities and non-official sources, such as the media. Case definitions, testing strategies and surveillance systems vary between countries. In addition, data completeness and levels of under-reporting vary between countries. All data should therefore be interpreted with caution. Refer to the original sources for more information regarding the case definitions in use and for details on the epidemiological situation.

Summary
Since 26 September 2023 and as of 31 October 2023, 53 327 new cholera cases, including 482 new deaths, have been reported worldwide. The five countries reporting most cases are Afghanistan (29 952), Haiti (6 051), Democratic Republic of the Congo (4 742), Ethiopia (2 913), and Somalia (2 265). The five countries reporting most new deaths are Haiti (174), Malawi (69), Sudan (64), Zimbabwe (55) and Ethiopia (46).

New cases have been reported from Afghanistan, Burundi, Cameroon, Democratic Republic of the Congo, Ethiopia, Haiti, Kenya, Malawi, Mozambique, Nigeria, Somalia, Sudan, Zambia and Zimbabwe. New deaths have been reported from Afghanistan, Cameroon, Ethiopia, Haiti, Malawi, Mozambique, Nigeria, Somalia, Sudan and Zimbabwe.

Since 1 January 2023 and as of 31 October 2023, 775 522 cholera cases, including 4 773 deaths, have been reported worldwide. In comparison, since 1 January 2022 and as of 19 November 2022, 1 186 159 cholera cases, including 1 753 deaths, were reported worldwide.

Since the last update, new cases and new deaths have been reported from:

Asia:
Afghanistan: Since 16 September 2023 and as of 28 October 2023, 29 952 new cases, including 18 new deaths, have been reported. Since 1 January 2023 and as of 28 October 2023, 195 336 cases, including 94 deaths have been reported. In comparison, in 2022 and as of 5 November 2022, 214 155 cases, including 77 deaths were reported.

Africa:
Burundi: Since 10 September 2023 and as of 28 October 2023, 502 new cases have been reported. Since 1 January 2023 and as of 28 October 2023, 1 227 cases, including nine deaths, have been reported. In comparison, in 2022 and as of 19 November 2022, no cases were reported.

Cameroon: Since 10 September 2023 and as of 28 October 2023, 817 new cases, including 10 new deaths, have been reported. Since 1 January 2023 and as of 28 October 2023, 20 842 cases, including 491 deaths have been reported. In comparison, in 2022 and as of 13 October 2022, 12 258 cases, including 245 deaths, were reported.

Democratic Republic of the Congo: Since 10 September 2023 and as of 28 October 2023, 4 742 new cases have been reported. Since 1 January 2023 and as of 28 October 2023, 36 084 cases, including 230 deaths, have been reported. In comparison, in 2022 and as of 16 October 2022, 11 456 cases, including 211 deaths, were reported.

Ethiopia: Since 10 September 2023 and as of 28 October 2023, 2 913 new cases, including 46 new deaths, have been reported. Since 1 January 2023 and as of 28 October 2023, 24 559 cases, including 321 deaths, have been reported. In comparison, in 2022 and as of 29 October 2022, 1 005 cases, including 24 deaths, were reported.

Kenya: Since 30 September 2023 and as of 28 October 2023, 13 new cases have been reported. Since 1 January 2023 and as of 28 October 2023, 8 814 cases, including 145 deaths, have been reported. In comparison, in 2022 and as of 16 October 2022, 413 cases, including four deaths, were reported.

Malawi: Since 7 August 2023 and as of 28 October 2023, 1 438 new cases, including 69 new deaths, have been reported. Since 1 January 2023 and as of 28 October 2023, 42 971 cases, including 1 261 deaths, have been reported. In comparison, in 2022 and as of 15 November 2022, 8 374 cases, including 252 deaths, were reported.

Mozambique: Since 10 September 2023 and as of 28 October 2023, 857 new cases, including three new deaths, have been reported. Since 1 January 2023 and as of 28 October 2023, 35 145 cases, including 147 deaths, have been reported. In comparison, in 2022 and as of 13 November 2022, 3 858 cases, including 19 deaths, were reported.

Nigeria: Since 30 July 2023 and as of 28 October 2023, 551 new cases, including 27 new deaths, have been reported. Since 1 January 2023 and as of 28 October 2023, 2 860 cases, including 84 deaths, have been reported. In comparison, in 2022 and as of 30 October 2022, 19 228 cases, including 466 deaths, were reported.

Somalia: Since 13 August 2023 and as of 28 October 2023, 2 265 new cases, including eight new deaths, have been reported. Since 1 January 2023 and as of 28 October 2023, 14 407 cases, including 38 deaths, have been reported. In comparison, in 2022 and as of 18 September 2022, 11 300 cases, including 44 deaths, were reported.

Sudan: Since 30 September 2023 and as of 28 October 2023, 1 270 new cases, including 46 new deaths, have been reported. Since 1 January 2023 and as of 28 October 2023, 1 535 cases, including 64 deaths, have been reported. In comparison, in 2022 and as of 19 November 2022, no cases were reported.

Zambia: Since 10 September 2023 and as of 28 October 2023, 56 new cases have been reported. Since 1 January 2023 and as of 28 October 2023, 938 cases, including 20 deaths, have been reported. In comparison, in 2022 and as of 31 July 2022, 160 cases were reported.

Zimbabwe: Since 10 September 2023 and as of 28 October 2023, 1 569 new cases, including 55 new deaths, have been reported. Since 1 January 2023 and as of 28 October 2023, 5 495 cases, including 151 deaths, have been reported. In comparison, in 2022 and as of 18 July 2022, 135 cases were reported. In 2023, no updates have been reported by: Congo, Eswatini, South Africa, South Sudan, Uganda and United Republic of Tanzania.

In 2023, since the last report, no updates have been reported by: Eswatini, Malawi, Nigeria, Somalia, South Africa, South Sudan or the United Republic of Tanzania.

America:
Haiti: Since 19 September 2023 and as of 30 October 2023, 6 051 new cases, including 174 new deaths have been reported. Since 1 January 2023 and as of 30 October 2023, 48 521 cases, including 671 deaths, have been reported. In comparison, in 2022 and as of 12 November 2022, 8 059 cases, including 151 deaths, were reported.

In 2023, since the last report, no updates have been reported by: Dominican Republic or Mexico.

ECDC assessment:

Cholera cases have continued to be reported in western Africa and South East Asia in recent months. Cholera outbreaks have also been reported in the eastern and southern parts of Africa, parts of the Middle East and in two countries in the Americas. Despite the number of cholera outbreaks reported worldwide, few cases are reported each year among travellers returning to the EU/EEA.

In this context, the risk of cholera infection in travellers visiting these countries remains low, even though sporadic importation of cases to the EU/EEA remains possible.

In 2021, 2 cases were reported in EU/EEA countries, while 3 and 26 cases were reported in 2020 and 2019, respectively. All cases had a travel history to cholera-affected areas.

According to the World Health Organization (WHO), vaccination should be considered for travellers at higher risk, such as emergency and relief workers who are likely to be directly exposed. Vaccination is generally not recommended for other travellers. Travellers to cholera-endemic areas should seek advice from travel health clinics to assess their personal risk and apply precautionary sanitary and hygiene measures to prevent infection. Such measures can include drinking bottled water or water treated with chlorine, carefully washing fruit and vegetables with bottled or chlorinated water before consumption, regularly washing hands with soap, eating thoroughly cooked food and avoiding consumption of raw seafood products.

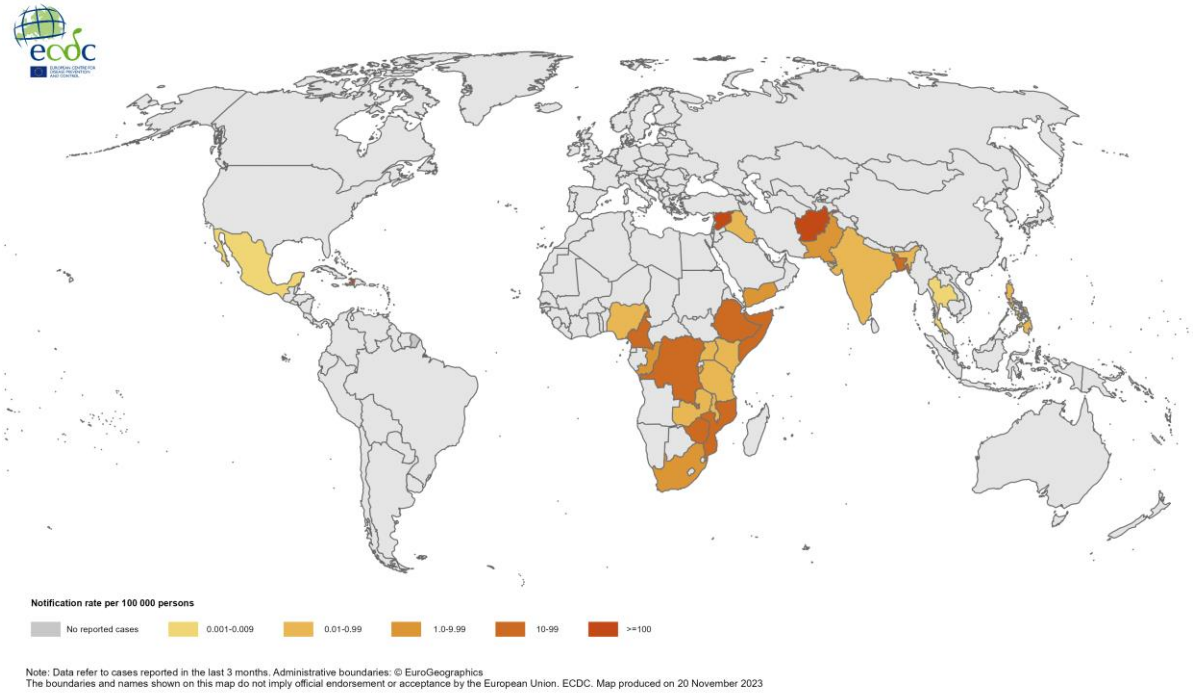
Actions:

ECDC continues to monitor cholera outbreaks globally through its epidemic intelligence activities in order to identify significant changes in epidemiology and provide timely updates to public health authorities. Reports are published on a monthly basis. The worldwide overview of cholera outbreaks is available on ECDC's website.

Last time this event was included in the CDTR: 20 November 2023

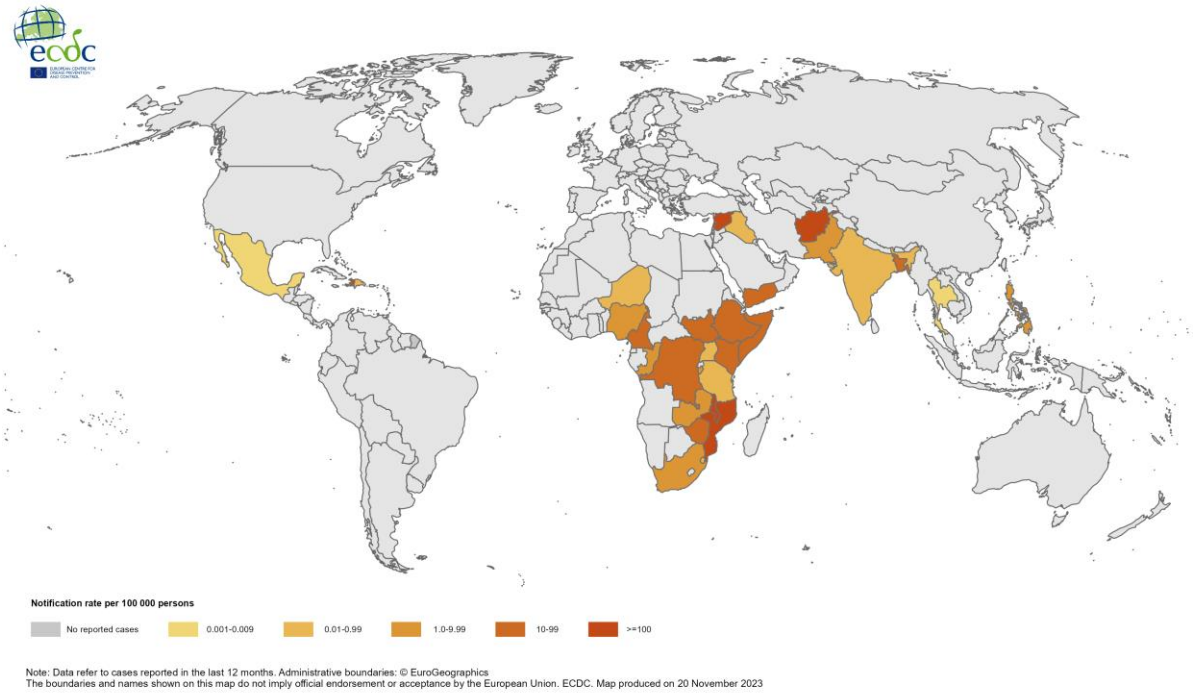
Maps and graphs

Figure 3. Geographical distribution of cholera cases reported worldwide, August to October 2023



Source: ECDC

Figure 4. Geographical distribution of cholera cases reported worldwide, November 2022 to October 2023



Source: ECDC