



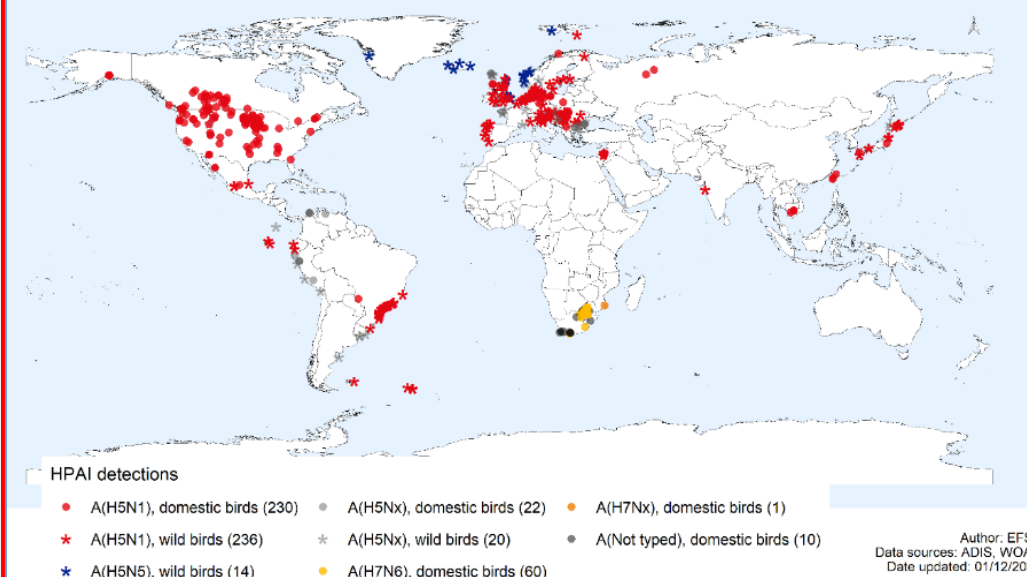
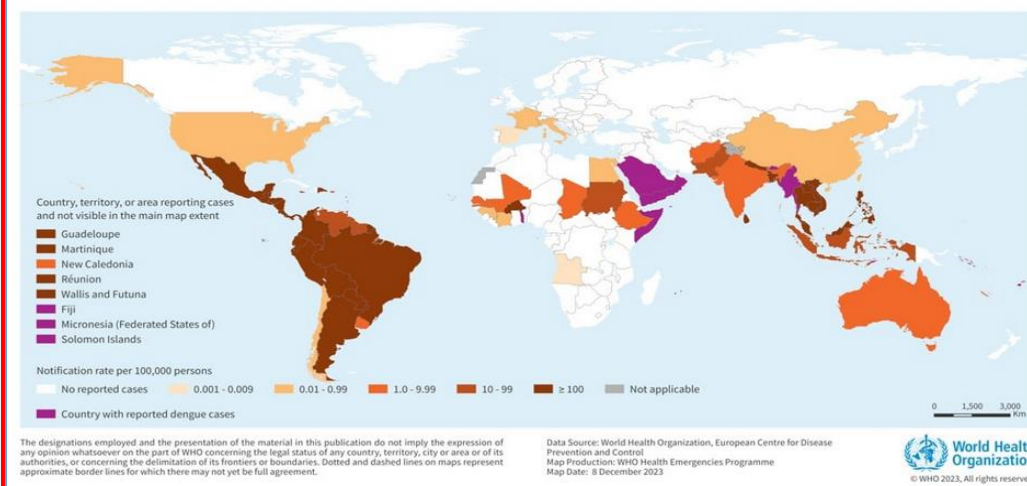
News:

- **FHPB:** The next iteration of the [NATO HEALTH SURVEILLANCE AND MULTINATIONAL MANAGEMENT OF EPIDEMIC CRISIS FOR OPERATIONAL AND STRATEGIC MEDICAL LEADERS](#) (MED-MS-31669) and [NATO HEALTH INVESTIGATION AND MANAGEMENT IN DEPLOYMENTS](#) (HEIMDAL) (MED-MS-42191) is now open for registration at the NATO MilMedCoE webpage.
- **Copernicus.EU:** According to multiple climate and weather-monitoring agencies, [2023 was the hottest year ever recorded](#), with data going back to 1850. Unprecedented sea surface temperatures, monthly heat records broken from June to December, and nearly half the days with temperatures above the 1.5°C threshold. This heating is accelerating humanitarian needs across the globe.
- **WHO:** described [dengue in Dezember as a significant public health challenge](#), with cases worldwide increasing tenfold between 2000 and 2019 increasing from 500 000 to 5.2 million. The year 2019 marked an unprecedented peak, with reported instances spreading across 129 countries.
- **WHO:** [launched an appeal for US\\$ 1.5 billion](#) to protect the health of the most vulnerable populations in 41 emergencies around the globe in 2024. The appeal covers the emergencies that demand the highest level of response from WHO, with the aim to reach over 87 million people. It is being issued in a context of complex emergencies cutting across crises of conflict, climate change and economic instability, which continue to fuel displacement, hunger, and inequality.
- **UN:** warned this week that as the risk of famine grows, and more people are exposed to deadly disease outbreaks, a fundamental [step change in the flow of humanitarian aid into Gaza is urgently needed](#). Getting enough supplies into and across Gaza now depends on: the opening of new entry routes; more trucks being allowed through border checks each day; fewer restrictions on the movement of humanitarian workers; and guarantees of safety for people accessing and distributing aid.
- **ECDC:** launched the “RespiCast” at the end of 2023. This new [European Respiratory Diseases Forecasting Hub](#) serves as a platform for real-time forecasts of respiratory disease activity and burden. The goal of RespiCast is to provide decision-makers, public health bodies and the public with reliable and timely information on the short-term epidemiological trajectory of respiratory illnesses across Europe.
- **WHO:** has [certified Cabo Verde as a malaria-free country](#), marking a significant achievement in global health. With this announcement, Cabo Verde joins the ranks of 43 countries and 1 territory that WHO has awarded this certification. Cabo Verde is the third country to be certified in the WHO African region, joining Mauritius and Algeria which were certified in 1973 and 2019 respectively. Malaria burden is the highest on the African continent, which accounted for approximately 95% of global malaria cases and 96% of related deaths in 2021.
- **ECDC:** To [assess the level of preparedness](#) of EU/EEA Member States to respond to zoonotic avian flu outbreaks, ECDC has carried out two surveys - one assessing the laboratory capacity for molecular diagnosis and characterisation of zoonotic influenza viruses, and the other focusing on measures applied to protect exposed people during outbreaks of highly pathogenic avian influenza.

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Figure 1: Countries/territories/areas reporting autochthonous dengue cases (November 2022–November 2023) *



Public health action needed to mitigate the impact of respiratory pathogens for 2023-24 winter season in Europe

Source: [ECDC](#)

SARS-CoV-2 is currently predominating while respiratory syncytial virus (RSV), seasonal influenza and other viruses co-circulate at lower levels but with an increasing trend. Severe disease related to SARS-CoV-2 currently impacts mainly those aged 65 years and above; increases in RSV activity have resulted in increasing hospital admissions, particularly among young children. Although currently low, influenza activity can be expected to further increase during the winter months. Seasonal outbreaks of various other pathogens causing respiratory symptoms that occur every few years (like *Mycoplasma pneumoniae*) also contribute to the increased numbers of patients presenting to primary and secondary care.

Key messages

- **Several viral and bacterial respiratory pathogens** are expected to continue co-circulating at variable levels during the coming months, and contribute to increased morbidity and mortality during this period. Widespread implementation of non-pharmaceutical measures during the COVID-19 pandemic led to very low circulation of both viral and bacterial respiratory pathogens which resulted in reduced population immunity. This may exacerbate the respiratory disease burden this winter, particularly amongst those with few or no pre-existing exposures, such as young children.
- **Primary care consultation rates for respiratory illness** have been gradually increasing since September 2023.
- **SARS-CoV-2** has continued to circulate at higher levels than seasonal influenza and respiratory syncytial virus (RSV), with severe disease predominantly affecting those aged 65 years and above.
- **RSV activity** has been **steadily increasing** over the past week, with the highest burden among children aged 0–4 years.
- **Seasonal influenza activity** remained at a **low level**. Influenza activity is expected to increase in the coming weeks, although it is not yet possible to determine how severe this season will be and whether currently available vaccines will be well matched with circulating strains.
- Since October 2023, **increases in respiratory infections due to *Mycoplasma pneumoniae*** were reported by six EU/EEA countries.
- Following substantial increases in all-cause mortality levels during the COVID-19 pandemic, all-cause mortality in Europe (both for the total population and in all age groups) returned to expected, pre-pandemic levels by spring 2023.
- Member States should prepare for the possible need **to increase emergency department and ICU capacity** (in terms of adequate staffing and bed capacity), for both adult and paediatric hospitals. Hospital administrators and managers should ensure that resources, such as medical/nursing staff and equipment, are also available. Ensuring healthcare staff are trained to implement appropriate infection prevention and control (IPC) measures will contribute to reducing the burden in healthcare settings and avoid outbreaks within these settings, including in long-term care facilities (LTCFs).
- **Clinicians** should be reminded that, when indicated, the **early use of antiviral treatments** for COVID-19 and influenza may prevent progression to severe disease in vulnerable groups. RSV prophylaxis for infants can be considered in accordance with national guidelines.

- It remains essential for Member States to continue **developing**, strengthening and sustaining resilient population-based integrated **surveillance systems**, including genomic surveillance, for influenza, COVID-19, and potentially other respiratory virus infections (such as RSV or new viral diseases of public health concern). Monitoring severe disease burden through hospital surveillance systems using SARI case definitions remains critical to assess the burden.
- **Active promotion of vaccinations** against seasonal influenza, COVID-19 and RSV in accordance with national recommendations is already ongoing and should continue in all Member States. **Vaccination remains the most effective measure for preventing COVID-19 and influenza infection from progressing to severe disease.**
- **Risk communication** activities for the public should be implemented, including targeted guidance for risk groups, healthcare workers and caretakers of vulnerable groups. Key recommendations include vaccination according to national recommendations, staying home when ill, respiratory etiquette and good hand hygiene, appropriate ventilation of indoor spaces, and promotion of appropriate public health and social measures (PHSM) (also called non-pharmaceutical interventions (NPIs)). People with high risk for severe disease (as well as their caretakers and close contacts) should consider using a face mask when in crowded public spaces.

ECDC recommendations:

- **Vaccinating the most vulnerable** against SARS-CoV-2 and influenza (as well as RSV in the countries that are introducing this vaccine) in order to prevent infection from progressing to severe disease.
- **Increasing emergency department and ICU capacity** (as needed in terms of adequate staffing and bed capacity) for both adult and paediatric hospitals.
- Ensuring **healthcare staff are trained** to implement appropriate infection prevention and control (IPC) measures to assist in reducing the burden in healthcare settings and avoid outbreaks within these settings, including long-term care facilities (LTCFs).
- **Raising awareness among healthcare professionals** to ensure timely diagnosis of cases and enhance hospital preparedness to manage increased patient load in emergency and intensive care units (ICU), in both paediatric and adult hospitals.
- Performing **rapid testing to facilitate early diagnosis** and management decisions, appropriate treatment and implementation of public health measures when appropriate.
- Reminding clinicians that when indicated, **the early use of antiviral treatments** for COVID-19 and influenza, may prevent progression to severe disease in vulnerable groups, and that RSV prophylaxis for infants can be considered (in accordance with national guidelines). Use of antibiotics for bacterial respiratory infections should follow a medical assessment as antibiotics do not treat viral infections.
- Recommending the **use of a face mask in crowded public spaces to people with high risk** for severe disease.
- Considering the use of [ECDC '5Cs diagnostic model for vaccination'](#) (addressing Confidence, Complacency, Constraints, Collective Responsibility and Calculation via their risk communication activities) for more effective promotion of vaccination uptake of the recommended vaccines.

How are Influenza-like illnesses trending in the United States and how do they compare to last year?



Introduction

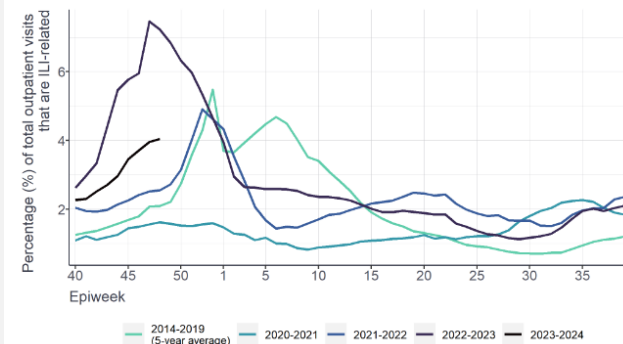
- The United States (US) is currently seeing a surge of influenza-like illness activity heading into the winter holiday period. This report will provide a national and state-level summary of all ILI activity, with a focus on COVID-19, respiratory syncytial virus (RSV), and influenza, looking at recent trends compared to previous seasons and weeks. Additionally, a global look of zoonotic influenza activity in humans and other mammals is described. A global update on COVID-19 activity is also provided, specific to activity related to JN.1, the newest Variant of Interest designated by the World Health Organization.¹

Current relevance

- National ILI activity:** ILI activity has been on the rise in the US since early fall, beginning later than last season but earlier than pre-pandemic patterns. RSV activity may have peaked in some regions, while influenza activity is still accelerating but at a lower rate than last season. Non-seasonal COVID-19 has been increasing since November from a relatively high baseline after a late-summer wave. ILI activity is expected to continue increasing into January.
- Regional ILI activity:** While disease activity is currently highest in the states in the South, the Northeast and mid-Atlantic regions are experiencing the highest increases in case incidence for COVID-19, influenza, and RSV detections. ILI activity is also increasing in states in the Northwest and Midwest.
- COVID-19 situation:** JN.1, a sublineage of the highly mutated BA.2.86 variant, is gaining prevalence rapidly in the US, and is predicted to become the dominant lineage within the next two weeks from the release of this report. This variant is expected to drive a surge of COVID-19 in the upcoming weeks, particularly as its increased prevalence coincides with the holiday season. There are no indications of increased severity over previous variants, and the XBB-targeted vaccines are expected to remain effective against severe disease among older adults.²
- Low vaccine uptake:** Uptake of seasonal influenza and updated COVID-19 vaccines are both lower than last year at this time. Furthermore, newly approved RSV vaccinations for target populations are low amid some supply constraints and other roll-out challenges and are not expected to have a high impact on this season's healthcare utilization.

- Comparison to last year:** Compared to the same reporting week in the previous 2022-2023 season, disease activity of influenza and RSV has been lower. Season onset has begun later than last season and at a slower rate in line with previous seasons. However, season onset appears to be earlier than seasons before 2022-2023, with reported cases and detections higher as a result.

National



Key Statistics (epiweek 48, as of 02-Dec-2023)	
% of outpatient visits that are ILI-associated week 48	4.1%
Relative change from previous 4-week average (29-Oct to 25-Nov-2023)	+18.6%
Relative comparison to same week last year 2022	-89%
Relative comparison to same week pre-pandemic years (2014 to 2018 average)	+95.2%
In 2022, activity peaked in week 47 at 7.5%	

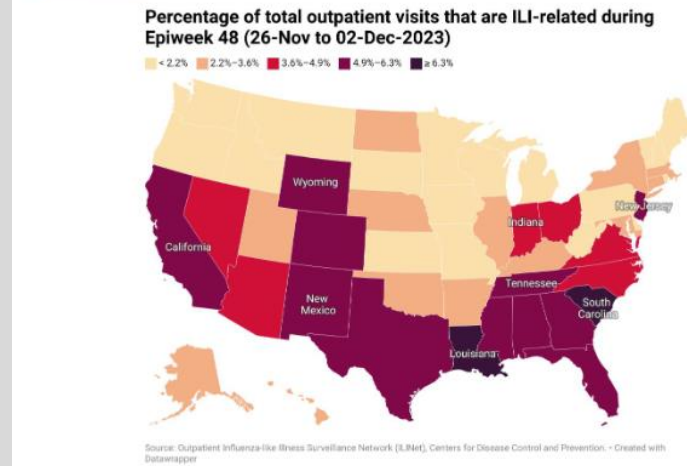
Observations from indicator-based surveillance

- National level:** Overall ILI activity has been increasing for 11 consecutive weeks.
- Highest Activity:** Southeast and Southwest states are reporting the highest ILI activity. New Jersey is one of the only states in the Northeast region observing high ILI activity.
- Increasing Activity:** ILI activity in some Northwest and Midwest states, such as Wyoming and Indiana, is on the rise.

Observations from event-based surveillance

- Increase in hospitalizations:** Rates of hospitalizations, especially due to COVID-19, have been increasing in the US, especially in older adults and children under the age of four.³
- Public health measures implemented:** Following a Thanksgiving holiday surge in ILI activity, some hospitals are re-implementing public health measures, such as visitor restrictions and mandatory masking.^{4, 5}
- School closures:** Increase in ILI activity has caused high levels of illness in students and staff, prompting school districts to cancel in-person classes or shut down entirely.^{6, 7}
- Puerto Rico has declared an influenza epidemic,** observing high levels of influenza activity, hospitalizations, and deaths, especially in unvaccinated adults and children.⁸
- Limited supply of preventative resources for infants:** Recently, there has been a limited supply of nirsevimab 100mg doses, a long-acting monoclonal antibody for infants and young children to protect against RSV. The CDC recommends prioritizing immunizations among young infants (<6 months) and those with underlying conditions.⁹

Subnational



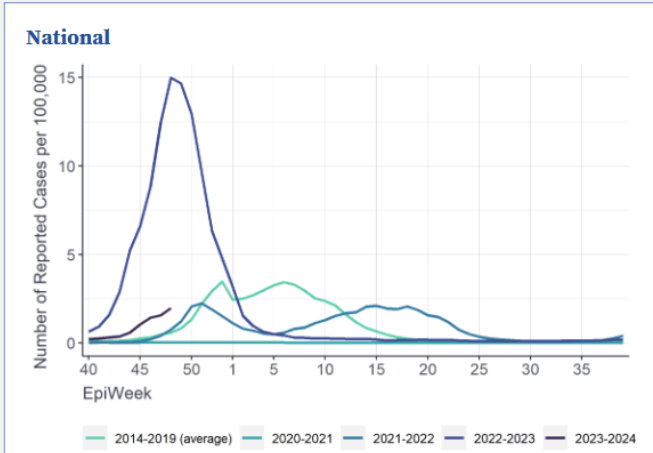
States with the highest % ILI activity	
Louisiana	7.6%
South Carolina	7.3%
New Mexico	6.1%
Wyoming	5.7%
California	5.5%
States with the highest % increase*	
South Carolina	+1.8%
Indiana	+1.6%
Tennessee	+1.4%
Louisiana	+1.4%
New Mexico	+1.3%

Source: Outpatient Influenza-like Illness Surveillance Network (ILINet), Centers for Disease Control and Prevention. * Created with BoltonMapper

How are Influenza-like illnesses trending in the United States and how do they compare to last year?

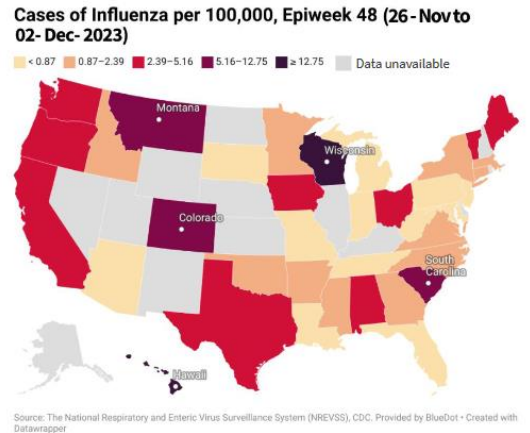


Seasonal Influenza



Compared to	Case rates current season
previous four weeks (25-Oct to 25-Nov-2023)	+69.7% relative increase
same week last season (11-Nov-2022)	-86.9% relative decrease
same week from 2014-2019 average	+233.7% relative increase

Season	Percent positivity
Current season (2023-2024)	6.8%
Same week last season (2022-2023)	25.5%
Same week in 2021-2022	2.8%



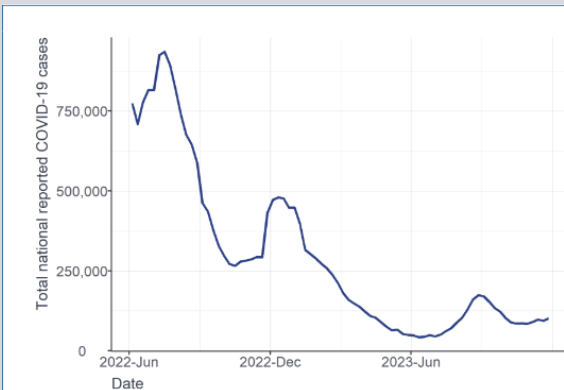
Observations (epiweek 48, as of 02- Dec-2023)

- States reporting the highest number of cases per 100,000 population: Hawaii (13.9), Wisconsin (12.8), and Colorado (6.3).
- States reporting the highest percent positivity: Louisiana (27.8%), Alabama (20.7%), and Florida (16.0%).
- When compared to the previous 4- week average percent positivity, Louisiana (+6.6%), Mississippi (+5.6%), and South Carolina (+5.6%) experienced the highest absolute increase.

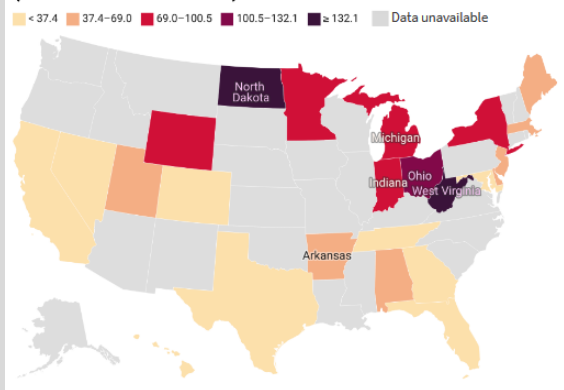
Observations from indicator-based surveillance

- Cases of influenza have been steadily increasing since epiweek 43 (Oct 22, 2023). Current season's onset is earlier than the average of the pre-pandemic influenza seasons, but later than last year's season. However, in line with pre-pandemic trends.
- The 2022-2023 influenza season peak occurred in epiweek 48 (2022/2023 peak incidence: ~15 cases per 100,000 vs current season: ~2 cases per 100,000).
- Six states throughout the country reported a decrease in cases compared to the previous three weeks, however none demonstrated large drops in case incidence.
- Except for South Carolina, cases in the Southeastern states are observing lower reported cases. However, several states located in the Southeast are reporting the highest increases in percent positivity.
- Rates of vaccination have been lower than last season.¹⁰
 - Children: 41.6% coverage (4.1% lower compared to same time last year)
 - Adults: 35.6-36.4% range coverage (2.8-4.4% lower compared to same time last year)

COVID-19



COVID-19 case rates per 100,000 people during Epiweek 48 (26-Nov to 02-Dec-2023)



Parental lineage	Variant	Prevalence	Growth advantage (95% CI)
XBB.1.9	HV.1	29%	+4% (1 – 8%)
BA.2.86	JN.1	7.8%	+81% (71 – 91%)
XBB.1.9	HK.3	5.9%	-2% (-8 – 4%)
XBB.1.5	JD.1.1	5.0%	+9% (2 – 17%)
XBB.1.9	JG.3	3.5%	+17% (8 – 26%)

SARS-CoV-2 Variants: The following are SARS-CoV-2 variants that have been increasing recently in the US, their prevalence, and growth advantage over other circulating variants over the last 30 days, as of 02-Dec-2023. ¹¹

States with the highest relative % increase*

West Virginia	+67.2%
North Dakota	+66.5%
Ohio	+55.9%
Michigan	+53.0%
Arkansas	+52.8%

Observations from indicator-based surveillance

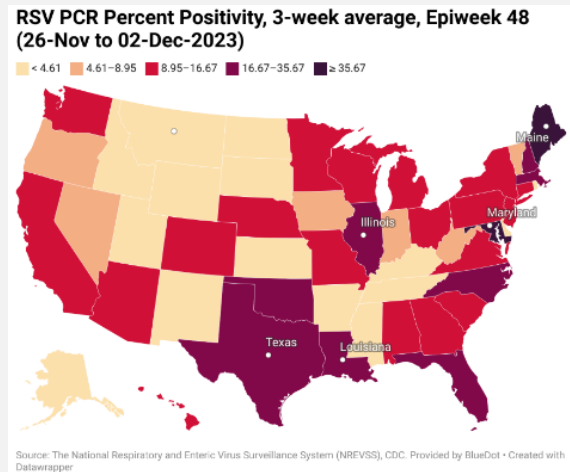
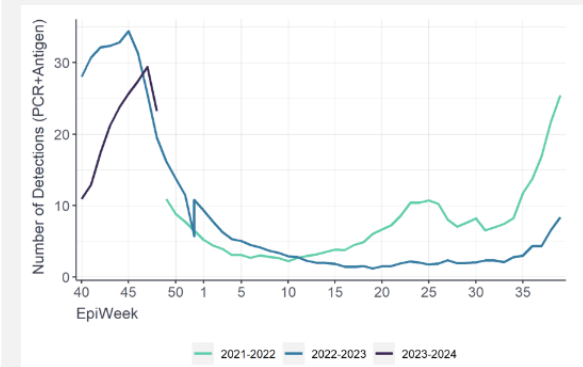
- COVID-19 cases and hospitalizations have been gradually increasing since early November.¹²
- COVID-19 activity has been highest in the northern states; however, activity in southern states is on the incline as seen by the large increase in activity observed in Arkansas.
- Test positivity is reported to be highest for states in the Midwest region, indicating COVID-19 activity may be on the rise in that region as well.¹³
- Comparison of COVID-19 cases this year cannot be made to the same week last year due to substantial changes in testing and reporting policies nationally. Several states have stopped reporting cases to the CDC since May 2023 likely due to the official end of the Public Health Emergency of International Concern as well as the end of the federal COVID-19 Public Health Emergency in the US.
- The baseline level of COVID-19 activity appears to be relatively high going into the holiday season (between 80,000 to 90,000 cases/day). The overall case counts plateaued at a higher level after the most recent summer 2023 wave, compared to after the previous winter wave of 2022- 2023.
- Currently, JN.1, a BA.2.86 sublineage, appears to be increasing at the highest rate in the US. This is in line with many countries in the EU and Canada, which have observed JN.1 becoming dominant over recent weeks. BlueDot is monitoring the impact of this variant on disease activity indicators in countries that have preceded the US in the trajectory of JN.1.

How are Influenza-like illnesses trending in the United States and how do they compare to last year?



- Most recently, JN.1 makes up approximately 34% of reported cases in New York, and the state is also beginning to report an increase in COVID-19 hospitalizations. [14](#), [15](#)
- According to a pre-print study from the Netherlands, the updated XBB.1.5-targeted vaccine appears to be effective in preventing hospitalizations among older adults. [2](#)
- Vaccine uptake: As of 15-Dec-2023, the following are the vaccine uptake percentages for the new XBB.1.5-targeted COVID-19 vaccines [16](#)
 - Children: 7.8% (95% confidence interval: 6.9-8.7)
 - All adults over 18: 18.3% (95% CI: 17.5-19.0)
 - Adults over 65: 37.4% (95% CI: 35.1-39.6)

Respiratory Syncytial Virus (RSV)



Observations from indicator-based surveillance

- The states observing the highest 5-week average number of RSV detections (both antigen and PCR) are Texas (1969.7), California (1738.7), and Wisconsin (915.3). These three states also observed the highest absolute increase in reported cases when comparing the 5-week averages reported at week 43 to the current week.
- Maine (1.6 to 12), Montana (0.8 to 5.7), and Vermont (3.0 to 17.3) are reporting the highest relative increases in 5-week average PCR and antigen detections. Louisiana (9.6 to 6.0), and Florida (169 to 150.3) are observing large relative decreases. Michigan has observed the highest decrease of all states (33 to 2.3).
- Current activity of RSV is highest in the southern states, and trends are showing increasing activity in the Northeastern and mid-Atlantic regions.
- As of 02-Dec-2023, only 15.9% of adults aged 60+ have received an RSV vaccine. [17](#)

Zoonotic Influenzas (in November-2023)

Human Cases: Highly Pathogenic Avian Influenza (H5N1) in Cambodia

Six human cases; three fatalities from 01-Jan to 27-Nov-2023

- So far, there has been no evidence of sustained transmission of avian influenza viruses among humans.
- Cases have been confirmed in three different provinces of Cambodia.

- Cases were reported in February, October, and November (2 cases each month).
- Contacts of the recently reported cases have been followed up and monitored.

Human Cases: Swine Influenza (H1N2)v in the United Kingdom

One human case as of 27-Nov-2023

- The first case of influenza A(H1N2)v reported in a human in the UK; detected via routine surveillance.
- Notably, the source of exposure has not been identified (no known contact with swine or other individuals with close contact with swine)

Animal Outbreak: Highly Pathogenic Avian Influenza A(H5N1) clade 2.4.4.b

- Outbreaks continue to be reported among sea mammals in several countries:
 - South America (including Peru, Chile, Argentina, Uruguay, and most recently, Brazil)
 - Antarctic regions (South Georgia and Falkland Islands).
- In the most recent outbreak in Brazil, almost 1,000 marine mammals (seals and sea lions) died due to this strain of avian influenza. Mass mortality events in wild mammals are notable as they indicate a possibility for mammal-to-mammal transmission in addition to multiple exposure events. It is difficult to distinguish between the two transmission events due to confounding factors such as environmental contaminations.
- Investigations are underway to better understand transmission and any additional relevant genomic sequencing information (e.g., relation to other circulating strains, notable genomic changes). [18](#), [19](#)

Global COVID-19 Activity (Wastewater Surveillance and Hospitalizations)

Several regions globally (such as Canada [20](#) and Austria [21](#), among many others) are currently detecting higher levels of SARS-CoV-2 in wastewater than at any point in this year.

- High levels may be associated with the increasing prevalence of JN.1 (sublineage of BA.2.86), waning population immunity, and behavioural factors.
- It is speculated that surges in SARS-CoV-2 wastewater levels in locations with increasing prevalence of JN.1 is related to changes in viral shedding relative to previous circulating lineages, or a longer duration of viral shedding. There is no evidence yet to support these possibilities.
- The increased viral load relative to levels observed since Aug-2023 in wastewater may also be attributed to a change in wastewater surveillance methodology in some locations. [22](#)

JN.1 is predicted to become the dominant lineage in the US within 2 weeks from the release of this report. [23](#)

Although wastewater activity at the national level in the US is comparable to levels reported this time last year, the Midwest region is seeing levels higher than this time last year. [24](#)

Several other regions globally (in addition to the US) are currently seeing an increase in hospitalizations ahead of the holiday season.

- For example, Singapore and Switzerland are both currently reporting the highest level of hospitalizations due to COVID-19 seen in 2023, especially among those 65 and older. [25](#), [26](#) The UK also started to report an increase in COVID-19 hospitalizations since the end of Nov-2023. [27](#)
- Notably, JN.1 has become dominant in all three of these regions, among many others globally, including Australia and other European countries.

Dengue - Global situation

Since the beginning of 2023, ongoing transmission, combined with an unexpected spike in dengue cases have resulted in close to a historic high of over five million cases and more than 5000 dengue-related deaths reported in over 80 countries/territories and five WHO regions: Africa, Americas, South-East Asia, Western Pacific and Eastern Mediterranean Regions globally (Figure 1). Close to 80% of these cases, or 4.1 million, have been reported in the Region of the Americas. Dengue is the most widespread arbovirus and causes the highest number of arboviral disease cases in the Region of the Americas, with cyclic epidemics recurring every 3 to 5 years. In addition, clusters of autochthonous dengue have been reported in the WHO European Region. However, these numbers are likely an underestimate of the true burden as most of the primary infections are asymptomatic and dengue reporting is not mandatory in many countries.

Several factors are associated with the increasing risk of spread of the dengue epidemic including, the changing distribution of the vectors (chiefly *Aedes aegypti* and *Aedes albopictus*), especially in previously dengue naïve countries; the consequences of El Niño phenomena in 2023 and climate change leading to increasing temperatures and high rainfall, humidity among others; fragile health systems in the midst of COVID-19 pandemic, political and financial instabilities in countries facing complex humanitarian crises and high population movements.

WHO has assessed the risk to be high globally considering the increasing risk of transmission and the upsurge of cases and deaths.

WHO Region of Africa:

Africa is among the top four regions most affected by arboviral diseases, including yellow fever, dengue, chikungunya, O'nyong nyong, Rift Valley fever, and Zika. In 2023, 171 991 dengue cases have been reported in countries in the region and 753 deaths. Evidence of dengue circulation has been detected in local populations and/or among travelers returning from more than 30 African countries. The most affected country in the region in 2023 is Burkina Faso, experiencing a significant increase in dengue cases compared with the same periods in 2021 and 2022.

WHO Region of the Americas

DENV is the most widespread arbovirus and causes the highest number of arboviral disease cases in the Region of the Americas, with cyclic epidemics recurring every 3 to 5 years. Although dengue is endemic in most countries of South America, Mexico and Central America, and the Caribbean countries, the second half of 2023 has witnessed an alarming increase in cases, with cumulative cases for the year surpassing all previous yearly totals and in some countries extending beyond historically affected areas of transmission. Dengue cases have increased in the Americas over the past four decades, from 1.5 million cases from 1980 to 1989 to 17.5 million in 2010-2019. Between 1 January 2023 and 11 December 2023 cases were reported from 42 countries and territories in the Region of the Americas, with 15 countries reporting active outbreak.

WHO Eastern Mediterranean Region

Dengue and severe dengue epidemics were first reported in the Region in 1998, and since then, their frequency and geographical spread have increased, with outbreaks occurring in all nine endemic countries: Afghanistan, Djibouti, Egypt, Oman, Pakistan, Saudi Arabia, Somalia, Sudan, and Yemen. Pakistan (n= 20 072), Saudi Arabia and Oman have reported the highest number of confirmed cases thus far in 2023.

WHO European Region

Dengue is not endemic in the WHO European Region and cases are mainly travel-related; however, since 2010, there have been reports of autochthonous cases in a number of countries in the region, including Croatia, France, Israel, Italy, Portugal and Spain. Between 1 January and 5 December 2023, sporadic autochthonous cases and outbreaks have been reported in three countries: Italy (n = 82), France (n = 43) and Spain (n = 3). Routine testing for dengue in Member States of the WHO European Region is not common unless there is a travel history and clinical suspicion, hence the actual numbers of dengue cases in 2023 is likely to be underestimated.

The *Ae. albopictus* mosquito, which is the main vector of dengue virus in Europe, is established in several Southern European countries. The mosquitoes have been detected further north and west in the past ten years and it has capacity to hibernate in winter. In 2023, this mosquito species has been identified in 13 countries of the region, a notable increase from eight countries in 2013.

WHO South-East Asia Region

In the WHO Southeast Asia region, 10 out of 11 Member States are known to be endemic for dengue virus. In 2023, several countries, including Bangladesh and Thailand, have reported a notable surge in dengue cases compared to previous years. In particular, India, Indonesia, Myanmar, Sri Lanka and Thailand rank among the world's 30 most highly endemic countries.

WHO Western Pacific Region

The Western Pacific Region continues to face a high burden of mosquito-borne arboviral diseases, particularly dengue. These diseases cause significant morbidity and mortality, especially among those unreached by quality primary health care (PHC) services. Between 1 January 2023 to 7 December 2023, over 500 000 dengue cases and 750 deaths were reported from eight countries/territories/areas in the WHO Western Pacific Region: Australia, Cambodia, China, Lao People's Democratic Republic, Malaysia, Philippines, Singapore, and Viet Nam. The most affected countries are the Philippines.

Public Health Response

Heterogeneity in capacity across Member States impacts the ability to detect and respond to DENV endemic and epidemic transmission.

The following activities are being undertaken at WHO to support Member States in the response to this event.

- 1. Coordination and leadership**
- 2. Preparedness and Response**
- 3. Multisectoral collaboration**
- 4. Vector control activities**
- 5. Laboratory**
- 6. Operations, Support and Logistics (OSL)**
- 7. Case management guidelines and capacity building**
- 8. Epidemiological Surveillance**
- 9. Risk communication and community engagement (RCCE)**

Other Infectious Disease Outbreaks and disasters – Asia



Avian Influenza A (H5N1) – Cambodia

Between 24 and 25 November 2023, the Ministry of Health of Cambodia notified WHO of two confirmed cases of human infection with influenza A(H5N1) from the same village in Kampot Province. Both cases were female, one in the 20-25 years age group and the other less than five years old. The first reported case visited a public hospital four days after having symptoms of fever, shortness of breath and cough. Samples were collected, which tested positive for H5N1, and the case died while in hospital. The second reported case was detected during enhanced surveillance by the public health authorities in response to the confirmation of the first reported case. The case had fever, cough and rash and is currently being treated in hospital. Epidemiological investigation shows both cases had exposure to backyard birds, which were reported to be sick, with some having died, over the prior month. The Ministry of Health's national and sub-national rapid response teams are investigating the source of the infection and coordinating response activities, including but not limited to active surveillance for additional cases, identifying close contacts for monitoring, and conducting health education campaigns to prevent transmission in the community. In total, six cases of influenza A(H5N1) have been reported from Cambodia this year. Influenza A(H5N1) infection in humans can cause severe disease, has a high mortality rate, and is notifiable under the International Health Regulations (2005).

From 2003 to 27 November 2023, a total of 882 human cases of infection with influenza A(H5N1), including 461 deaths, have been reported globally from 23 countries. Almost all cases of human infection with avian influenza A(H5N1) have been linked to close contact with infected live or dead birds, or influenza A(H5N1)-contaminated environments. Based on evidence so far, the virus does not infect humans easily and spread from person-to-person appears to be unusual.

Based on available information so far, WHO assesses the risk to the general population posed by this virus to be low.

Source: [WHO](#)

Dengue – Bangladesh

During week 1 in 2024 (1 to 7 January 2024), a total of 378 new dengue cases were reported in Bangladesh, a 47.4% decrease compared to week 52 (25 to 31 December 2023) (n=719). The number of new deaths also decreased by 62.5% from 8 in week 52 to 3 in week 1 (2024).

Between 1 and 31 December 2023 a total of 9 288 cases including 83 deaths have been reported. This compares to 5 024 cases including 27 deaths during the entirety of December 2022.

In the year 2023, a total of 321 179 dengue cases, including 1 705 deaths, were reported. This represents a case fatality rate (CFR) of 0.53%. Comparatively, in the previous year, 2022, there were 62 382 reported cases, with 281 associated deaths and CFR at 0.45%. This marks a significant increase of approximately 416% in the number of cases and a 506% increase in deaths compared to 2022.

Source: [WHO SEA](#)

Upsurge of respiratory illnesses among children-Northern China - update

Since mid-October 2023, the WHO has been monitoring data from Chinese surveillance systems that have been showing an increase in respiratory illness in children in northern China.

Chinese authorities attributed this increase to lifting of COVID-19 restrictions and the arrival of the cold season, and due to circulating known pathogens such as influenza, *Mycoplasma pneumoniae*, respiratory syncytial virus (RSV), and severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). *Mycoplasma pneumoniae* and RSV are known to affect children more than adults.

No changes in the disease presentation were reported by the Chinese health authorities. Chinese authorities advised 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 illness has not resulted in patient loads exceeding hospital capacities.

Source: [WHO](#)

Measles: Sri Lanka

An increasing number of laboratory-confirmed measles cases were reported from May to December 2023 in Sri Lanka. The first case was reported on 23 May 2023 through the routine disease surveillance system from the Colombo Municipality Area. As of mid-November, there were 710 confirmed measles cases were reported across the country affecting 150 Medical Officer of Health (MOH) areas out of a total of 358 MOH areas.

Majority of the cases were reported from Colombo district (42%) and Gampaha district (18.6%) followed by Jaffna district (11.3%).

Out of the total positive cases, 17% were among less than 9 months old aged infants while nearly 35% of patients belonged to the 20 to 30 years age category (who were born after 1984, before introduction of the 2nd MCV).

Based on recommendation from the Advisory Committee on Communicable Diseases, a Supplementary Immunization Activity (SIA) with MMR vaccine was carried out on 6th January 2024 in a selected nine districts.

During the period of SIA, a nationwide catch-up programme was launched to vaccinate children (9 months to 15 years) who have missed their due routine Measles Containing Vaccine/s (MCV).

Zika Virus Disease: Thailand

As of 31 December 2023, there have been 758 cases of Zika virus disease reported in 36 provinces of Thailand in 2023. Morbidity was 1.15 per 100,000 population. No fatalities reported. Out of 758 cases, 33 pregnant women were identified with Zika virus infection. The most commonly affected age groups are 25-34 years old (23%), followed by 35-44 years old (22%), and then 45-54 years old (16%). The male-to-female ratio is 1 to 1.41. In 2023, the highest number of new cases has been reported from Bangkok (n=166), followed by Chanthaburi (n=142), Phetchabun (n=124) and Saraburi (n=39).

Source: [WHO SEA](#)

Other Infectious Disease Outbreaks - Americas



Western Equine Encephalitis - Argentina

According to the most recent weekly Ministry of Health of Argentina's National bulletin on 10-Jan-2024, there have been an additional nine laboratory-confirmed human cases of WEE, including one more death. That brings the laboratory-confirmed cases to 21 human cases (including 2 deaths). The overall reported cases (confirmed and suspected) include 134 human cases (including two deaths) with a case fatality ratio of 9.5%. Thus far, all *laboratory-confirmed* cases have been epidemiologically linked to individuals who either live or work within rural areas where affected WEE in horses have been reported. The most recent death corresponds to a 72-year-old female with underlying health conditions who lived in a rural area near Buenos Aires. The onset of her symptoms was in December 2023 and she required intensive unit care and ventilation respiratory support within 48 hours of admission to the hospital.

The affected provinces are Santa Fe (8 cases), Buenos Aires (11 cases), Entre Ríos (1 case), Santiago del Estero (1 case).

Source: [WHO](#), [NewsMedia](#), [MinnisteriaArgentina](#), [PAHO](#)

Brazil – Oropouche (OROV) and Mayaro (MAYV) virus diseases

As of 22 DEC 2023, 60 OROV and six MAYV infections have been reported in Acre State, northwestern Brazil, during 2023, with >60% of confirmed cases registered from JAN – MAR 2023. Most of the OROV cases have been reported in Rio Branco (32 cases), followed by Acrelândia and Manoel Urbano (both 8) and Porto Acre (5). MAYV cases have been reported in Cruzeiro do Sul (3), and Mâncio Lima, Rio Branco, and Xapuri (all 1). Acre health officials believe cases are underreported due to lack of testing, as these viruses are rarely found in urban areas.

The clinical presentation of OROV and MAYV infections is similar to that of other arboviruses (chikungunya, dengue, Zika), and the majority of cases are self-limiting.

OROV transmission in Brazil occurs year-round and is primarily maintained via a sylvatic cycle by wildlife hosts and arthropod vectors. Reports suggest that non-human primates and sloths play a role as hosts, while *Culicoides paraensis* acts as the main vector. OROV has infected >500k individuals across Latin America, primarily in Brazil and Peru; however, these numbers are vastly underestimated. Further, a recent modeling study showed that up to an estimated five million individuals are at-risk of exposure to OROV, with higher risk along the coasts of Colombia, Ecuador, and Venezuela, eastern Bolivia, Brazil, central Mexico, and Panama.

MAYV transmission in Brazil also occurs year-round and is primarily maintained via the sylvatic cycle involving non-human primates and *Haemagogus* spp. mosquitoes but can potentially be transmitted in an urban cycle by *Ae. aegypti*, a vector widely distributed in the Americas. Human cases are associated with recent exposure to tropical forest environments inhabited by these vectors. Sporadic cases and localized outbreaks of MAYV have been recorded in the Americas, including the Amazon region of Brazil, mainly in the North and Central-west regions.

Source: [Infectious Diseases of Poverty](#)

Dengue – Brazil

Health officials in Brazil are warning of a potential record 5 million dengue cases this year, a threefold increase compared to 2023. They attribute the surge to climate change and El Niño, which have increased the transmission of mosquito-borne diseases. The World Health Organization described dengue last month as a significant public health challenge, with cases worldwide increasing tenfold between 2000 and 2019.

Source: [NewsMedia](#)

COVID-19 – United States

The U.S. continues to be the leading contributor of new coronavirus disease 2019 cases (48% over the past week), followed by Russia (13%), Italy (9%), and Brazil (8%). A recent preprint study found that JN.1 is one of the most immune-evading sublineages to-date, largely due to its hallmark S:L455S mutation. A CDC study found that in a multiscale mathematical model, treating 20% of symptomatic COVID-19 patients with Paxlovid over a period of 300 days beginning in JAN 2022 resulted in life and cost savings. As of 05 JAN, healthcare facilities in at least six U.S. states (CA, IL, MA, NC, NY, and WA) had reinstated mask mandates due to rising cases of respiratory illnesses.

Source: [DHA Public Health](#)

Poliomyelitis – Multi-country (World)

In 2023, and as of 10 January 2024, one new case of acute flaccid paralysis (AFP) caused by wild poliovirus type 1 (WPV1) was reported from Pakistan (1). In 2023, and as of 10 January 2024, 15 new cases caused by circulating vaccine-derived poliovirus type 1 (cVDPV1) were reported from the Democratic Republic of the Congo (DRC) (14) and Madagascar (1). In 2022, an additional five cases were reported from DRC (5).

In 2023, and as of 10 January 2024, 67 new cases of AFP caused by cVDPV2 were reported from 11 countries, including four new countries: Chad (6), the DRC (9), Guinea (21), Indonesia (2), Mali (3), Mauritania (1)(new), Mozambique (1)(new), Niger (1)(new), Nigeria (21), South Sudan (1)(new), Tanzania (1).

Source: [ECDC](#)

Other Infectious Disease Outbreaks - Europe



Measles - United Kingdom

Cases of measles have reached historically high levels over the last 34 years since the measles-mumps-rubella (MMR) roll-out in 1990 in the West Midlands, England. According to official data, Birmingham Children's Hospital has confirmed more than 50 cases in just a month, of which only 5% have a history of MMR vaccination. Around 40% of the total cases have required hospitalization which is of great concern. In addition, data from the UK Health Security Agency (UKHSA) shows that there have been 133 laboratory-confirmed cases since 1-Oct-2023 in the West Midlands, which is the highest number of cases reported in years. Additionally, 96 cases remain under investigation for the same period. Around 80% of cases in the West Midlands have been seen in Birmingham, about 10% in Coventry, while other areas have also reported measles clusters.

Birmingham and London are reported to have the **lowest MMR vaccination rates across the U.K.**, with 83% and 80% respectively for the 2nd dose, which is much lower than the 95% MMR recommendation for herd immunity by the WHO.

In England and Wales, there were 1,603 suspected cases of measles in 2023. That's a 118% increase from 2022 and a 345% increase from 2021.

More recently, media outlets reported a 20-month-old infant in Portugal confirmed with measles with a recent travel to an unspecified location in the U.K. This highlights that there is likely a larger ongoing outbreak in the origin country.

Source: [GovUK](#), [NewsMedia](#)

Influenza A(H1N2) variant virus infection - United Kingdom of Great Britain and Northern Ireland

On 25 November 2023, the International Health Regulations National Focal Point (IHR NFP) of the United Kingdom of Great Britain and Northern Ireland (United Kingdom) notified the World Health Organization (WHO) of a human case of swine-origin influenza A(H1N2) virus infection. This is the first swine influenza A(H1N2)v case reported in the United Kingdom. This case was identified as part of routine surveillance of respiratory illnesses. The source of infection for this case is under investigation and contact tracing is in process. To date, no other confirmed cases associated with this event have been reported.

Current evidence suggests that these viruses have not acquired the ability to sustain transmission among humans. Due to the constantly evolving nature of influenza viruses, WHO continues to stress the importance of global surveillance to detect virological, epidemiological and clinical changes associated with circulating influenza viruses that may affect human (or animal) health and timely virus sharing for risk assessment.

Source: [WHO](#)

COVID-19 - Italy

The surge in COVID-19 and influenza cases in Italy in December has resulted in hospitals becoming overwhelmed in major cities such as Milan, Rome, and Turin. In Rome and the Lazio Region, >1.1k patients were waiting to be admitted to healthcare facilities. The limited capacity of Intensive Care Units has been a dramatic issue in Italy since the start of the pandemic. As of November 2023, roughly 85 percent of the total Italian population was fully vaccinated.

Source: [NewsMedia](#), [Newsweek](#)

SARS-CoV-2 variant classification - EU/EEA

ECDC classified BA.2.86 as a variant of interest (VOI) on 24 November 2023. As of 8 January 2024, BA.2.86 is the dominating lineage in EU/EEA countries and continues to increase rapidly, with a median proportion for week 51 (18 December 2023 to 24 December 2023) of 75.6% (range:41.7-91.2%).

Source: [ECDC](#)

Measles - Europe

In November 2023, 429 cases of measles were reported by twelve countries. Between January and November

2023, 2 242 cases of measles were reported in The European Surveillance System (TESSy) by 22 countries.

Through epidemic intelligence, ECDC identified 954 new measles cases in six EU/EEA countries December, including reports on an ongoing outbreak in Romania. Three measles-related deaths have been reported in Romania, two in children less than one year of age, and one in an adult with underlying condition.

Overall, measles transmission currently remains low in the EU/EEA.

Source: [ECDC](#)

Overview of respiratory virus epidemiology - EU

Most EU/EEA countries report activity above baseline in at least one indicator: for ARI, three reported low activity and while four country reported baseline; for ILI, seven countries reported low activity, three medium, one high and one country reported very high activity while five reported baseline activity. This indicates an increase in acute respiratory infections presenting in primary care in EU/EEA countries.

Among countries reporting data on testing in primary care sentinel settings for seasonal influenza, RSV or SARS-CoV-2, the median test positivity at the EU/EEA level was highest for influenza at 26%. Seventeen countries reported seasonal influenza activity above the 10% positivity threshold in sentinel primary care. Concurrently, the qualitative indicators reported for seasonal influenza confirm increased influenza activity and geographic spread in the EU.

Among the 593 sentinel primary care detections of seasonal influenza, 529 (89%) were typed as influenza virus type A, 12 were typed as influenza virus type B (2%) and the remaining 52 (9%) influenza viruses remained untyped.

Source: [ECDC](#)

Other Infectious Disease Outbreaks - Africa

Source: [WHO](#)

Anthrax - Zambia

On 1 November 2023, the International Health Regulations (IHR) National Focal Point of Zambia notified WHO of an anthrax outbreak in humans. The first human cases were reported from the Dengeza Health Post in the Sinazongwe District of the Southern Province on 5 May 2023. Around the same time period, domestic (cattle and goats) and wild animals (hippopotami) were reportedly dying from an unknown cause in the surrounding areas. As of 20 November 2023, 684 suspected human cases, including four deaths, a Case Fatality Ratio (CFR) of 0.6%, were reported from 44 out of 116 districts in nine of Zambia's 10 provinces. Sinazongwe district is the epicenter.

This unprecedented outbreak marks the first major occurrence spanning nine out of 10 country provinces. The latest large-scale outbreak reported in Zambia occurred in 2011 with a total of 511 suspected cases. Response activities have been taken from both human and animal sides, such as active surveillance, case management, laboratory diagnosis, health promotion, and Risk Communication and Community Engagement (RCCE), meat inspection and livestock vaccination.

The **risk of the event spreading within Zambia is assessed to be high** due to the unrestricted animal movement and carcasses within and between provinces. The **risk at the regional level is also considered high** due to the frequent movement of both animals and people between Zambia and its neighbouring countries (such as Angola, Botswana, the Democratic Republic of the Congo, Malawi, Mozambique, Namibia, Tanzania, Uganda and Zimbabwe).

Source: [WHO](#)

Mpox (monkeypox)- Democratic Republic of the Congo

Eleven of the 26 provinces of the Democratic Republic of the Congo are identified as endemic for mpox, but in more recent years the total number of mpox cases and the number of provinces reporting mpox has been expanding, to 22 provinces as of November 2023. There are two known clades of MPXV: clade I, previously known as the Congo Basin clade; and clade II, previously called the West African clade; clade II further has two subclades: clade IIa and clade IIb.

From 1 January through 12 November 2023, a total of 12 569 suspected mpox cases, including 581 suspected mpox deaths (case fatality ratio: 4.6%), have been reported in 156 health zones from 22 out of 26 (85%) provinces in the Democratic Republic of the Congo. This is the highest number of annual cases ever reported, with new cases in geographic areas that had previously not reported mpox, including Kinshasa, Lualaba, and South Kivu. Among suspected cases, 1106 were tested by real time polymerase chain reaction (RT-PCR), and 714 were positive for MPXV (positivity rate of 65%).

Cases with travel history to endemic provinces have been driving chains of human-to-human transmission in non-affected provinces. The first cluster of suspected cases of sexually transmitted mpox was identified in Kenge, Kwango province of the Democratic Republic of the Congo. It included six confirmed cases, five men and one woman, with no deaths among the confirmed cases. This cluster of mpox cases represents the first documented sexual transmission of MPXV Clade I. On 28 July 2023, another confirmed case of mpox was recorded in another man who had sex with men in Kenge town in the Democratic Republic of the Congo. He was not listed among the contacts of the first group of cases and the limited epidemiological investigation did not directly link him to the March-April cluster.

Source: [WHO](#)

Flood - Ethiopia

The recent floods in Ethiopia, occurring between October and November 2023, have had a devastating impact on the country, particularly in the Somali, Oromia, Afar, South Ethiopia, and Gambela regions. The floods, caused by heavy rainfall and river overflows, have affected an estimated 1.5 million people, with around 632 700 displaced and 57 reported deaths as of 27 November 2023. In the Somali region alone, over one million people have been affected.

The situation in Ethiopia remains critical, with vast numbers of people affected by floods, leading to displacement, destruction of infrastructure, and an increase in health risks, including cholera, malaria, and measles outbreaks.

Dengue – Cabo Verde

On 3 November 2023 Dr Agostinho Neto Central Hospital in Praia was notified of three suspected cases of arboviruses. The samples of the suspected cases were sent to the Institute Pasteur Dakar for laboratory investigation of which two samples were subsequently confirmed positive for the dengue virus by PCR on 6 November. The identified serotype was DENV-3, while tests for other arboviruses yielded negative results. From 3 November to 18 December 2023, the country has recorded a total of 397 suspected cases. The most affected municipalities include Praia (n=107) and São Filipe (n=256) where 90% of cases were reported. All cases presented with acute illness; symptoms included fever, headache, arthralgia, myalgia, diarrhoea, vomiting, retro-orbital pain, and skin rash.

The current situation in Cape Verde reflects a concerning dengue outbreak, characterized by a significant number of suspected and confirmed cases. The high density of *Aedes aegypti* mosquitoes, coupled with conducive climatic conditions, poses an ongoing threat.

Anthrax - Uganda

From June 2023, Kyotera district in Uganda reported 24 animal deaths suspected of Anthrax. Local communities allegedly consumed meat from an infected animal, and 35 people experienced symptoms like itching, rash, and skin lesions. By 19 November, at least 12 people had died from these symptoms. As of 3 December, 38 human samples were collected and tested, and *Bacillus anthracis* (Anthrax) was confirmed in one sample in three of the collected human samples.

As of 5 December 2023, in Uganda, human Anthrax outbreaks have been reported in three districts; Kyotera with a total of 35 cases (3 confirmed, 7 probable and 25 suspected case), Kween with 5 cases (3 confirmed and 2 suspected) and 0 death, and Ibanda with 9 cases (5 confirmed cases with 0 death).

Zika - Mali

The MoH confirmed 12 cases of Zika including 2 co-infections (Dengue-Zika) by the molecular biology and genomics laboratory of the University Clinical Research Center (UCRC).

The samples come from the infectious and tropical diseases department of Point G hospital in Bamako. The cases came from Bamako and Koulikoro. The case investigation report will be shared by DGSH surveillance in due course.

**NATO Health Surveillance and Multinational Management of Epidemic
Crisis for Operational and Strategic Medical Leaders” COURSE**

and

**NATO Health Investigation and Management in Deployments
(HEIMDAL)” COURSE**

Venue: CESPA in Marseille, FRA
Date: 09 to 19 April 2024
Registration: NATO MILMED COE Website