Flu News Europe
Joint ECDC–WHO/Europe weekly influenza update

Summary

Week 44/2022 (31 October - 06 November 2022)

- Malta, Portugal and United Kingdom (Scotland) reported widespread influenza activity and/or high intensity.
- The percentage of all sentinel primary care specimens from patients presenting with ILI or ARI symptoms that tested positive for an influenza virus was 7% which is similar to the previous week (8%) and is below the epidemic threshold set at 10%.
- Germany, Kazakhstan and United Kingdom (Scotland) reported seasonal influenza activity above 10% positivity in sentinel primary care.
- Both influenza type A and type B viruses were detected among all monitoring systems, with influenza A(H3) viruses being dominant in sentinel and non-sentinel surveillance.
- Hospitalized cases with confirmed influenza virus infection were reported from other wards (14 type A viruses and 1 type B virus) and SARI surveillance (71 type B viruses, of which 69 were from Kazakhstan, and 10 type A viruses), but none were reported from ICU wards. When comparing the different influenza type distributions by system, it is important to consider that different sets of countries are reporting to each system.

2022-2023 season overview

- For the Region as a whole, influenza activity remained at inter-seasonal levels but above the levels seen in the 4 previous seasons for the same time of year.
- Overall, influenza A(H3) viruses have dominated across most surveillance systems.

Other news

For more information about the SARS-CoV-2 situation in the WHO European Region visit:

- WHO website: https://www.who.int/emergencies/diseases/novel-coronavirus-2019
- ECDC website: https://www.ecdc.europa.eu/en/novel-coronavirus-china

Qualitative indicators

For week 44/2022, of 36 countries and areas reporting on intensity of influenza activity, 18 reported baseline-intensity (across the Region), 17 reported low-intensity (across the Region), and 1 reported high-intensity (Malta) (Fig. 1).

Of 36 countries and areas reporting on geographic spread of influenza viruses, 9 reported no activity (across the Region), 19 reported sporadic spread (across the Region), 3 reported local spread (Bosnia and Herzegovina, Lithuania and Malta), 3 reported regional spread (France, Germany and Ukraine) and 2 reported widespread activity (Portugal and United Kingdom (Scotland)) (Fig. 2).

Figure 1. Intensity of influenza activity in the European Region, week 44/2022

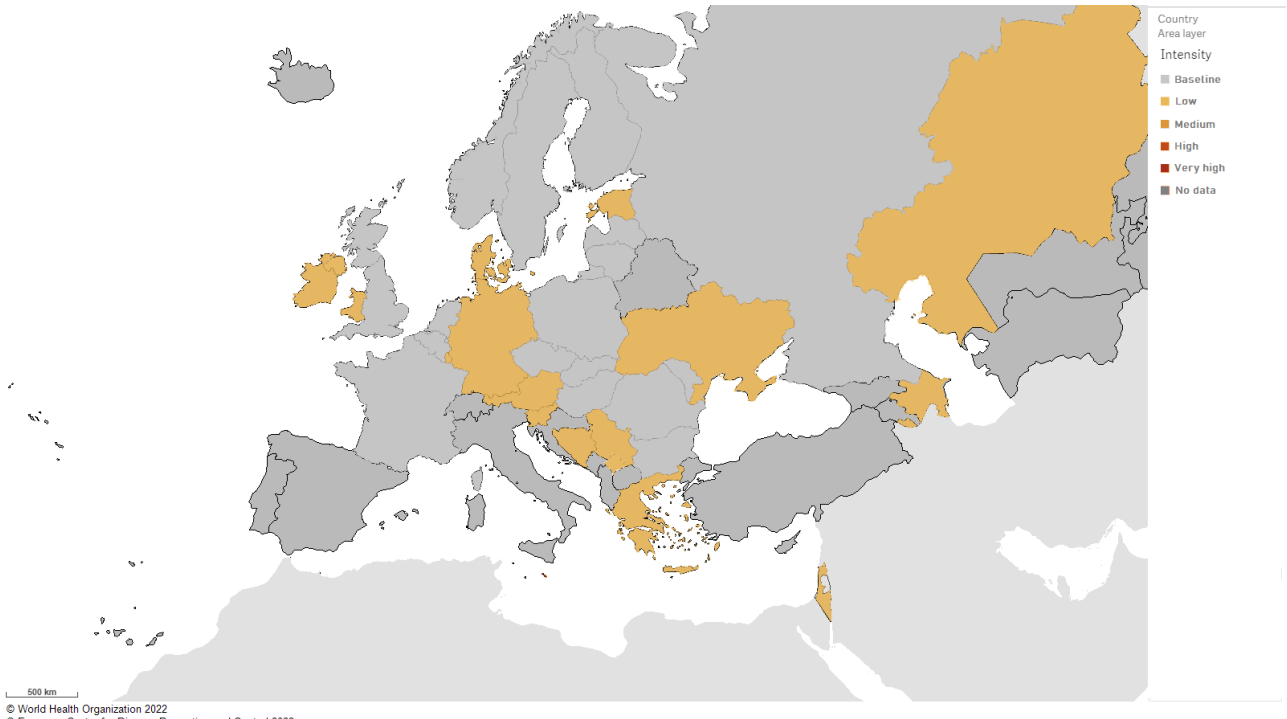
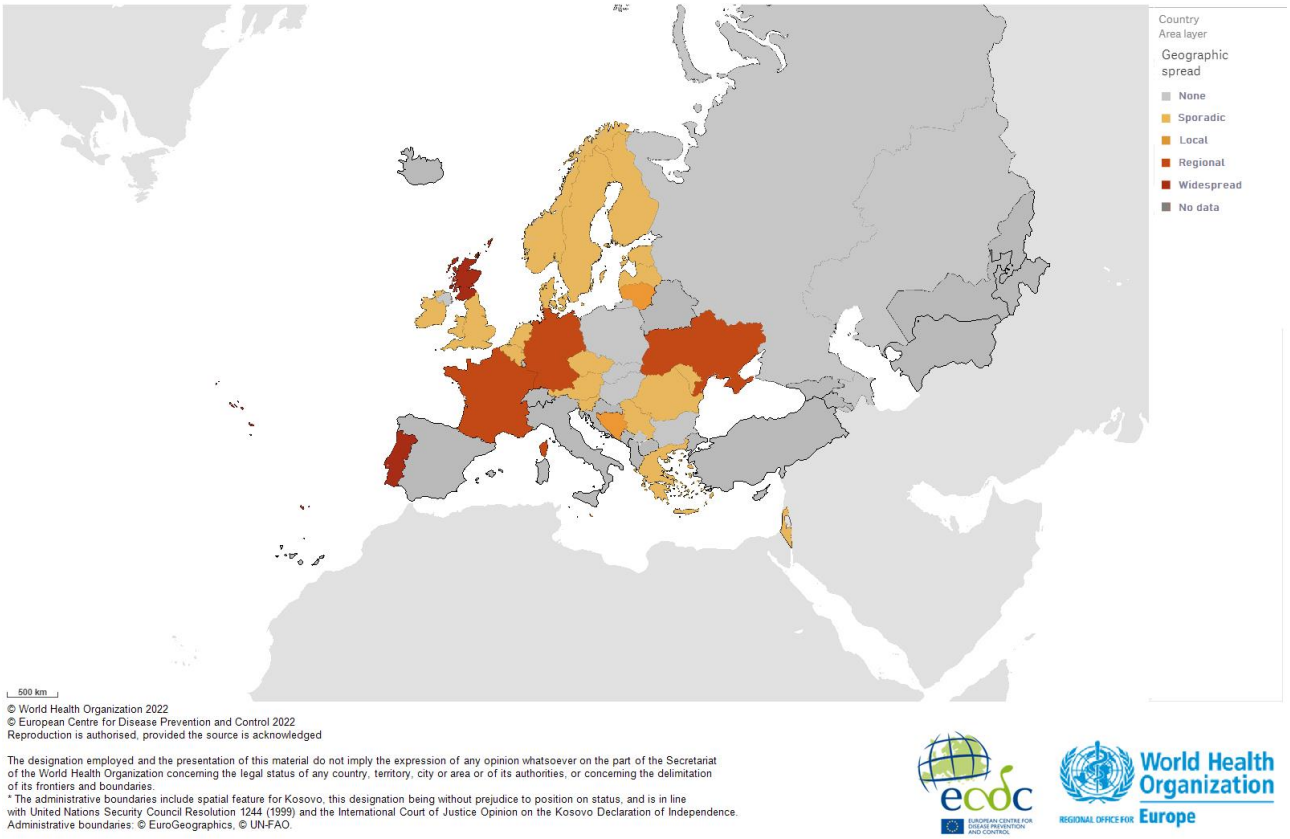


Figure 2. Geographic spread of influenza viruses in the European Region, week 44/2022



For interactive maps of influenza intensity and geographic spread, see the Flu News Europe website.

Please note:

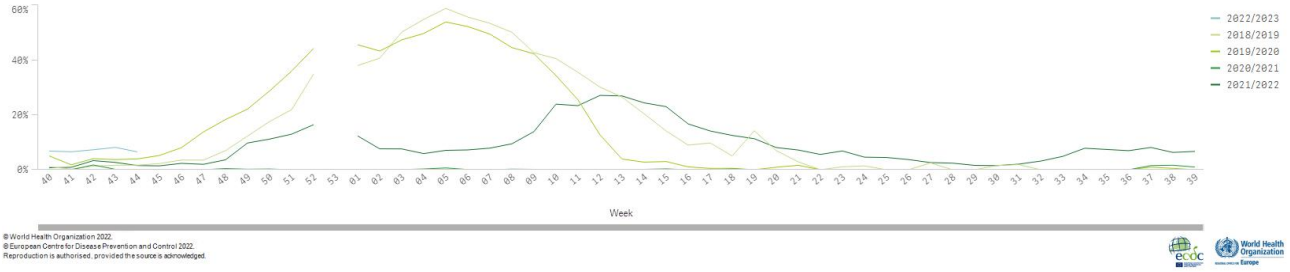
- Assessment of the intensity of activity indicator includes consideration of ILI or ARI rates. These ILI or ARI rates might be driven by respiratory infections other than influenza virus, including SARS-CoV-2, leading to observed increases in the absence of influenza virus detections.

- Assessment of intensity and geographic spread indicators includes consideration of sentinel and non-sentinel influenza virus detection data. Non-sentinel influenza virus detections, which are often higher, might translate into reporting of elevated geographic spread even in the absence of sentinel detections.

Influenza positivity

For the European Region, influenza virus positivity in sentinel primary care specimens was 7% in week 44/2022 which is similar to the previous week (8%) and is below the epidemic threshold set at 10%, but above the levels seen in the 4 previous seasons for the same time of year (Fig. 3).

Figure 3. Influenza virus positivity in sentinel-source specimens by week, European Region, 2022/2023 and four prior seasons



External data sources

Mortality monitoring:

For week 44/2022 overall pooled EuroMOMO estimates of all-cause mortality for the participating European countries showed elevated excess mortality. Data from 25 European countries or subnational regions were included for pooled analysis of all-cause mortality.

The full EuroMOMO report can be found here: https://www.euromomo.eu/

Please refer to the EuroMOMO website for a cautionary note relating to interpretation of these data.

Primary care data

Syndromic surveillance data

Of the countries and areas in which thresholds for ILI activity are defined, countries in eastern (Azerbaijan and Kazakhstan), northern (Denmark and Estonia), southern (Greece and Türkiye) and western (Austria and Luxembourg) areas of the European Region reported activity above baseline levels.

Of the countries and areas in which thresholds for ARI activity are defined, countries in eastern (Kazakhstan) and northern (Latvia) areas of the European Region reported activity above baseline levels.

Please note:

- Assessment of the syndromic surveillance data of ILI or ARI rates might be driven by respiratory infections other than influenza virus, including SARS-CoV-2, leading to observed increases in the absence of influenza virus detections. The thresholds

mentioned are related to the Moving Epidemic Method (MEM) and based on historic ILI/ARI data.

Viruses detected in sentinel-source specimens (ILI and ARI)

For week 44/2022, 79 (7%) of 1 214 sentinel specimens tested positive for influenza virus; 85% were type A and 15% were type B. Of 58 subtyped A viruses, 72% were A(H3) and 28% A(H1)pdm09. The type B viruses were not ascribed to a lineage (Fig. 4 and Table 1). Of 21 countries and areas across the Region that each tested at least 10 sentinel specimens in week 44/2022, 3 reported a rate of influenza virus detections above 10%: Germany (17%), Kazakhstan (11%) and United Kingdom (Scotland) (11%).

For the season to date, 689 (7%) of 9 678 sentinel specimens tested positive for an influenza virus. More influenza type A (n=608, 88%) than type B (n=81, 12%) viruses have been detected. Of 505 subtyped A viruses, 416 (82%) were A(H3) and 89 (18%) were A(H1)pdm09. Of 29 influenza type B viruses ascribed to a lineage, all were B/Victoria (64% of type B viruses were reported without a lineage) (Fig. 4 and Table 1).

Details of the distribution of viruses detected in non-sentinel-source specimens are presented in the **virus characteristics** section.

Figure 4. Influenza virus positivity and detections by type, subtype/lineage – sentinel sources, WHO European Region, season 2022/2023

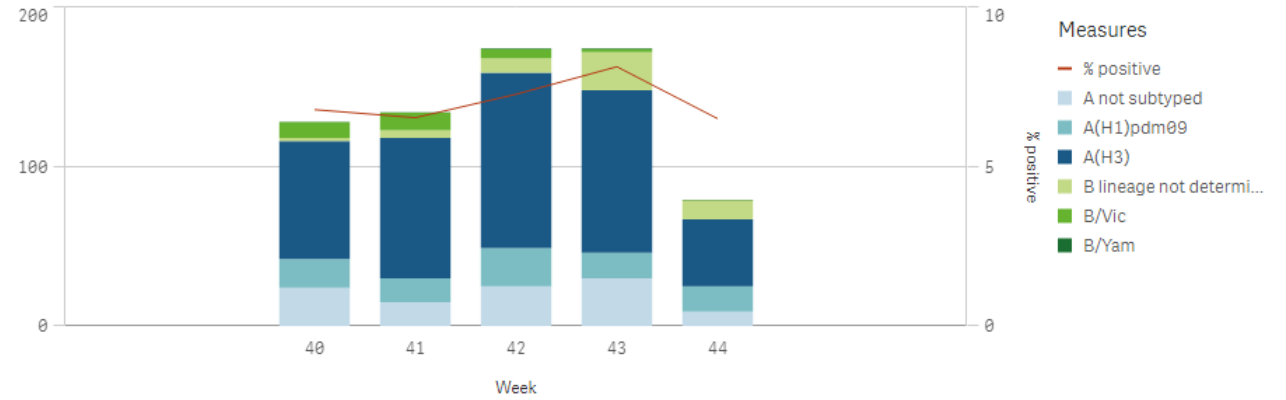


Table 1. Influenza virus detections in sentinel source specimens by type and subtype for week 44/2022 and cumulatively for the season

Sentinel	Current Week (44)		Season 2022-2023	
Virus type and subtype	**Number**	**%[a]**	**Number**	**%[a]**
Influenza A	**67**	**84.8**	**608**	**88.2**
A(H1)pdm09	16	27.6	89	17.6
A(H3)	42	72.4	416	82.4
A not subtyped	9	-	103	-
Influenza B	**12**	**15.2**	**81**	**11.8**
B/Victoria lineage	0	-	29	100
B/Yamagata lineage	0	-	0	0
Unknown lineage	12	-	52	-
Total detections (total tested)	**79 (1 214)**	**6.5**	**689 (9 678)**	**7.1**

[a] For influenza type percentage calculations, the denominator is total detections; for subtype and lineage, it is total influenza A subtyped and total influenza B lineage determined, respectively; for total detections, it is total tested.

External data sources

Influenzanet collects weekly data on symptoms in the general community from different participating countries across the EU/EEA. Please refer to the website for additional information for this week.

Hospital surveillance

A subset of Member States and areas monitors severe disease related to influenza virus infection by surveillance of 1) hospitalized laboratory-confirmed influenza cases in ICUs, or other wards, or 2) severe acute respiratory infections (SARI).

Laboratory-confirmed hospitalized cases

1.1) Hospitalized laboratory-confirmed influenza cases - Intensive care units (ICUs)

There were no reports of hospitalized laboratory-confirmed influenza cases in ICUs during week 44/2022 (Fig. 5 and 6).

Since week 40/2022, more influenza type A (n=73, 90%) than type B (n=8, 10%) viruses were detected (from Czechia, Ireland, Sweden and United Kingdom (England)). Of 6 subtyped influenza A viruses, 3 were A(H1)pdm09 and 3 were A(H3). No influenza B viruses were ascribed to a lineage. Of 8 cases with known age, 6 were 65 years and older and 2 were in the age group 15-64.

Figure 5. Number of laboratory-confirmed hospitalized influenza cases in intensive care units (ICU) by week of reporting, WHO European Region, season 2022/2023

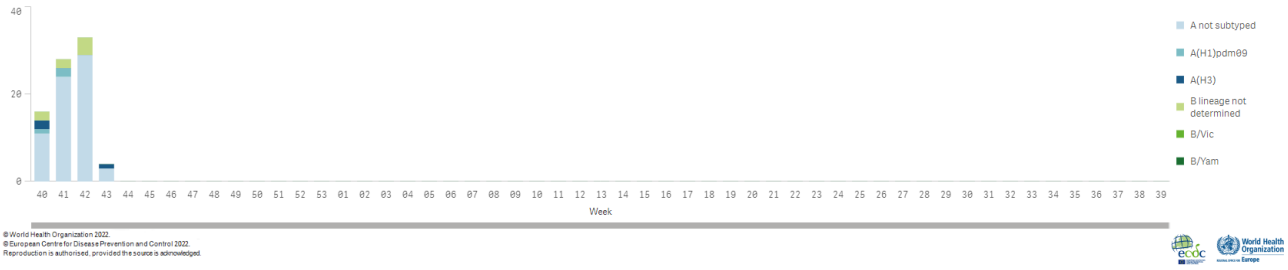
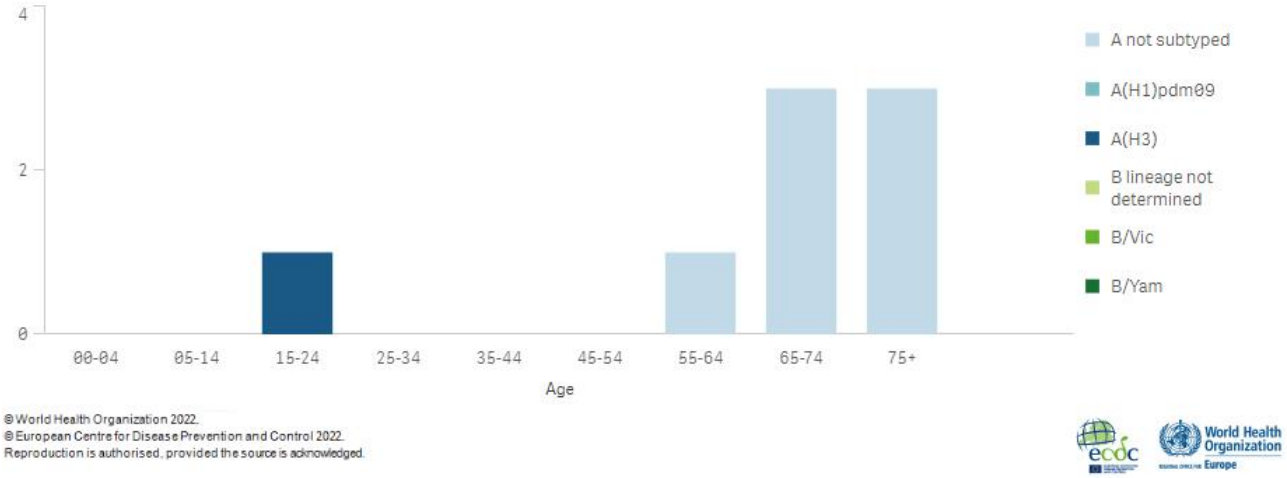


Figure 6. Distribution of influenza virus types, subtypes/lineages by age group in intensive care units (ICU), WHO European Region, season 2022/2023



1.2) Hospitalized laboratory-confirmed influenza cases – other wards

For week 44/2022, 15 laboratory-confirmed influenza cases were reported from other wards in Ireland; influenza type A viruses (94%) were detected more frequently than influenza type B viruses (6%). No viruses were ascribed to a subtype or lineage (Fig. 7 and 8).

Since week 40/2022, 150 influenza type A viruses and 11 influenza type B viruses were detected in Ireland. Of 8 subtyped influenza A viruses, 4 were A(H1)pdm09 and 4 were A(H3). The 161 cases with known age fell in four age groups: 60 were 15-64 years old, 59 were 65 years and older, 27 were 5-14 years old and 15 were 0-4 years old.

Figure 7. Number of laboratory-confirmed hospitalized influenza cases in wards other than intensive care units (non-ICU) by week of reporting, WHO European Region, season 2022/2023

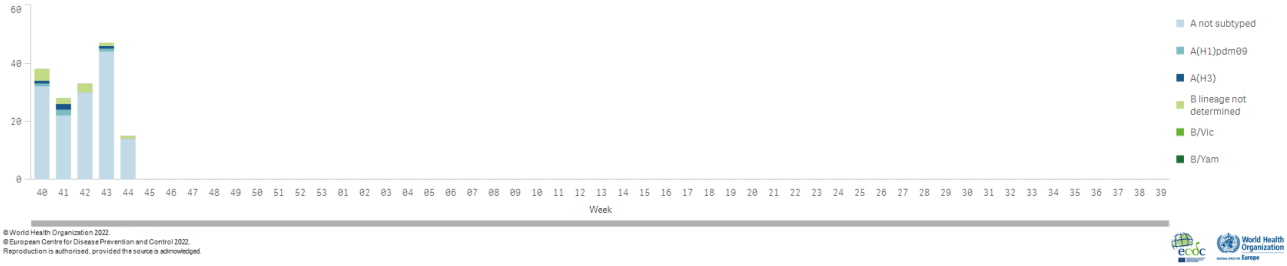
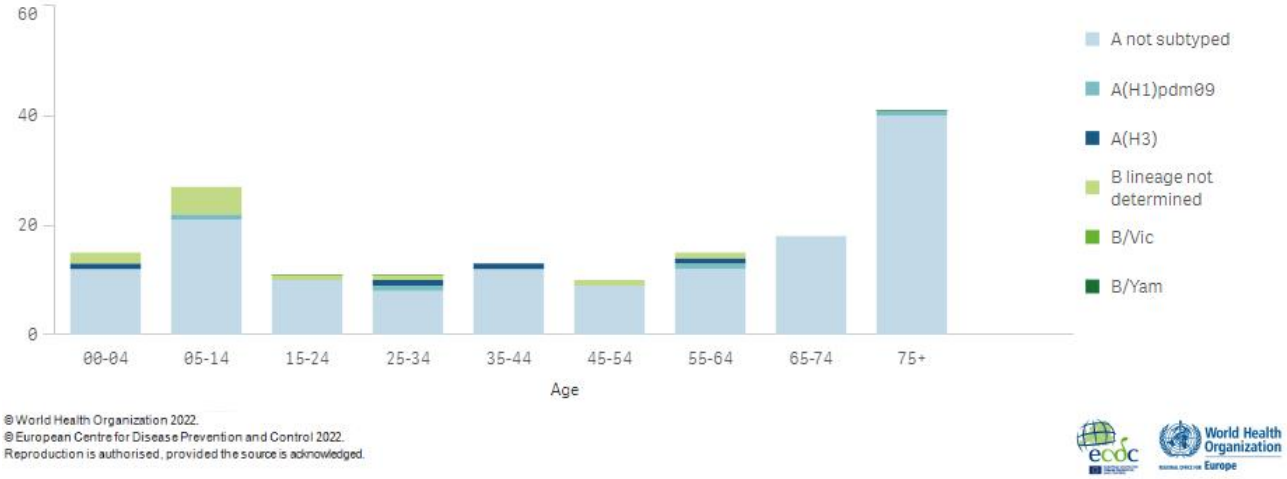


Figure 8. Distribution of influenza virus types, subtypes/lineages by age group in wards other than intensive care units (non-ICU), WHO European Region, season 2022/2023



Severe acute respiratory infection (SARI)-based hospital surveillance

For week 44/2022, 5 280 SARI cases were reported by 13 countries or areas (Bosnia and Herzegovina, Germany, Ireland, Kazakhstan, Lithuania, Malta, Montenegro, North Macedonia, Republic of Moldova, Russian Federation, Serbia, Türkiye and Ukraine). Of 317 specimens tested for influenza viruses, 26% (n=81) were positive (Fig. 9). Of these, influenza type B viruses (n=71, 88%; 69 from Kazakhstan and 2 from Russian Federation) were detected more frequently than influenza type A viruses (n=10, 12%). The highest positivity rates for influenza virus detections were reported by Kazakhstan (39%) and Malta (26%).

For the season, 19 478 SARI cases were reported by 22 countries or areas (Albania, Armenia, Belarus, Bosnia and Herzegovina, Croatia, Georgia, Germany, Ireland, Kazakhstan, Kyrgyzstan, Lithuania, Malta, Montenegro, North Macedonia, Republic of Moldova, Russian Federation, Serbia, Spain, Türkiye, Ukraine, Uzbekistan and Kosovo (in accordance with Security Council resolution 1244 (1999))). For SARI cases testing positive for influenza virus since week 40/2022, type B viruses have been the most common (n=261, 91%; 253 from Kazakhstan, 6 from Kyrgyzstan and 2 from Russian Federation). Of the 27 cases infected with influenza A, subtyping was performed for 18 viruses: 10 were A(H3) and 8 were A(H1)pdm09 viruses. The influenza type B viruses ascribed to a lineage (n=92, 91%) were all B/Victoria (Fig. 10).

Figure 9. Number of severe acute respiratory infection (SARI) cases (bar) and positivity for influenza virus and SARS-CoV-2 (line) by week, WHO European Region, season 2022/2023

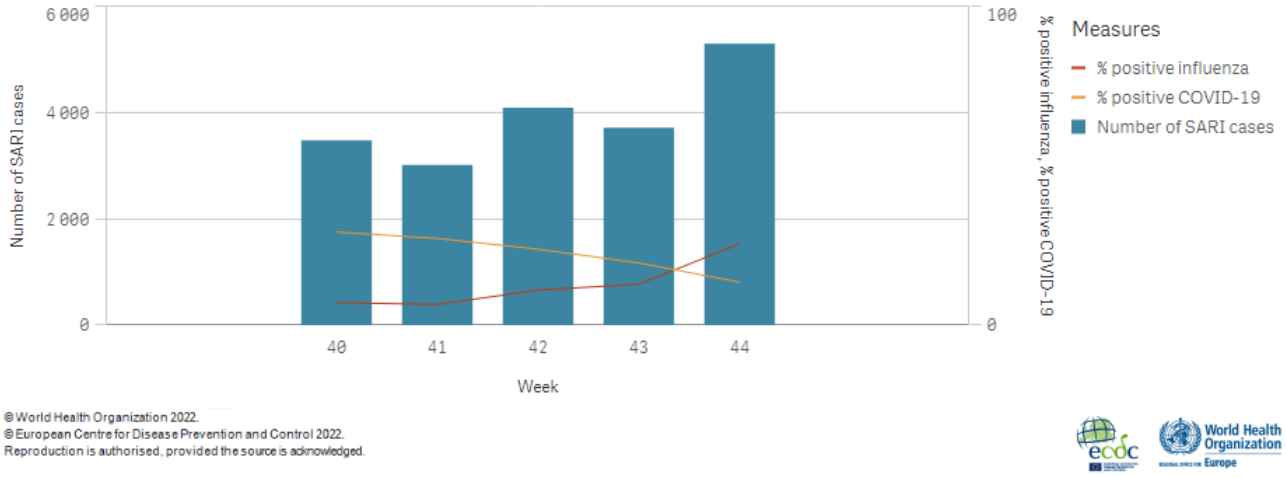
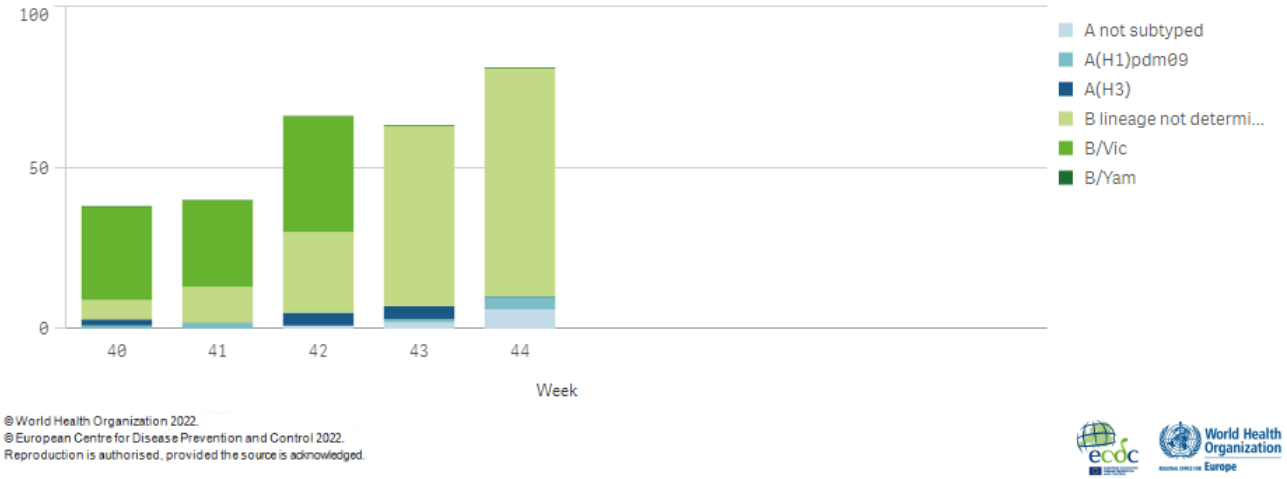


Figure 10. Influenza virus detections by type, subtype/lineage from severe acute respiratory infection (SARI), WHO European Region, season 2022/2023



Virus characteristics

Details of the distribution of viruses detected in sentinel-source specimens can be found in the **Primary care data** section.

Non-sentinel virologic data

For week 44/2022, 934 of 37 252 specimens from non-sentinel sources (such as hospitals, schools, primary care facilities not involved in sentinel surveillance, or nursing homes and other institutions) tested positive for influenza virus; 690 (74%) were type A and 244 (26%) were type B. Of 176 subtyped A viruses, 92 (52%) were A(H3) and 84 (48%) were A(H1)pdm09. Of 2 type B viruses ascribed to a lineage, both were Victoria lineage (Fig. 11 and Table 2).

For the season to date, more influenza type A (n=3 993, 85%) than type B (n=716, 15%) viruses have been detected. Of 1 599 subtyped A viruses, 1 014 (63%) were A(H3) and 585 (37%) were A(H1)pdm09. Of 81 influenza type B viruses ascribed to a lineage, all were B/Victoria (89% of type B viruses were reported without a lineage) (Fig. 11 and Table 2).

Figure 11. Influenza detections by type, subtype/lineage and week, non-sentinel sources, WHO European Region, season 2022/2023

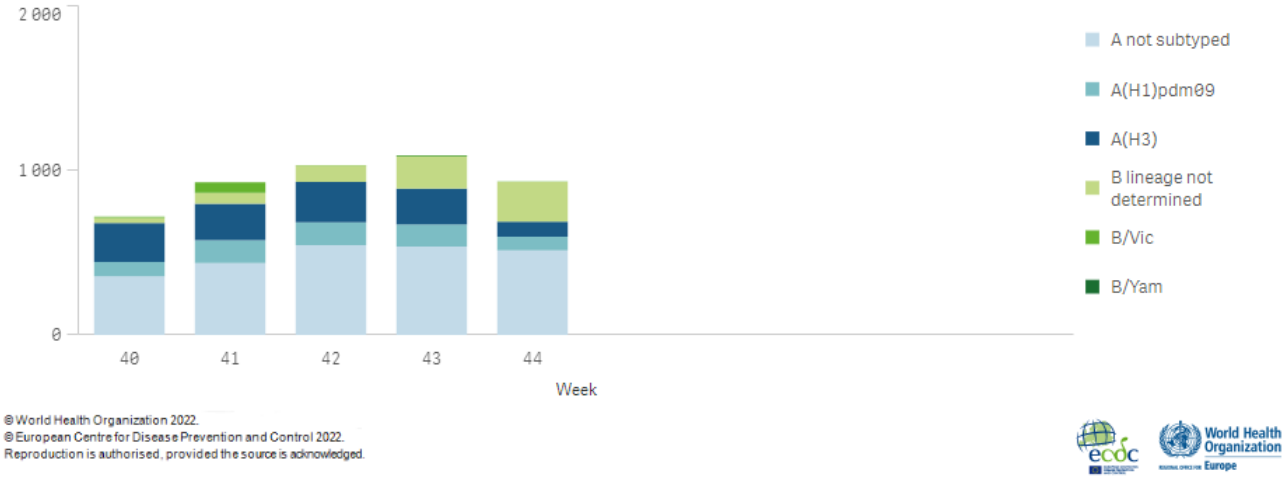


Table 2. Influenza virus detections in non-sentinel-source specimens by type and subtype, week 44/2022 and cumulatively for the season

Non-sentinel	Current Week (44)		Season 2022-2023	
Virus type and subtype	**Number**	**%[a]**	**Number**	**%[a]**
Influenza A	**690**	**73.9**	**3 993**	**84.8**
A(H1)pdm09	84	48	585	37
A(H3)	92	52	1 014	63
A not subtyped	514	-	2 394	-
Influenza B	**244**	**26.1**	**716**	**15.2**
B/Victoria lineage	2	100	81	100
B/Yamagata lineage	0	0	0	0
Unknown lineage	242	-	635	-
Total detections (total tested)	**934 (37 252)**	**NA**	**4 709 (209 760)**	**NA**

[a] For type percentage calculations, the denominator is total detections; for subtype and lineage, it is total influenza A subtyped and total influenza B lineage determined, respectively; as not all countries have a true non-sentinel testing denominator, no percentage calculations for total tested are shown.

Genetic characterization

Of the 19 genetically characterized A(H1)pdm09 viruses up to week 44/2022, all belonged to clade 6B.1A.5a.2, of which 15 (79%) were represented by A/Norway/25089/2022, 3 (16%) were represented by A/Sydney/5/2021 and 1 (5%) was represented by A/Victoria/2570/2019.

Among the 53 A(H3) viruses characterized up to week 44/2022, all belonged to clade 3C.2a1b.2a.2, of which 28 (53%) were represented by A/Slovenia/8720/2022, 24 (45%) were represented by AH3/Bangladesh/4005/2020. Only one virus was not attributed to a subgroup.

Up to week 44/2022, 3 B/Victoria viruses were characterized and assigned to clade V1A.3a.2 but no subgroup was assigned.

Currently, WHO's September virus characterization report is available and describes available data from circulating viruses for the 2021-2022 influenza season: type A influenza virus circulation dominated over type B, due mainly to A(H3) viruses. Vaccination remains the best protective measure for prevention of influenza.

Previously published influenza virus characterization reports are available on the ECDC website (up to May 2022) and the WHO website.

Antiviral susceptibility testing

Up to week 44/2022, 92 viruses were assessed for susceptibility to neuraminidase inhibitors (NAI) (53 A(H3), 19 A(H1)pdm09 and 3 B viruses genotypically, and 16 A(H3) and 1 B viruses phenotypically), and 74 viruses were assessed for susceptibility to baloxavir marboxil (BXM) (53 A(H3), 18 A(H1)pdm09 and 3 B viruses genotypically). Phenotypically no viruses exceeded IC_{50}-fold-change thresholds for reduced susceptibility to NAI and, genotypically, no markers associated with reduced susceptibility to NAI or BXM were identified.

Vaccine

Recently published results from a controlled, randomised trial in UK concluded that concomitant vaccination with one of two SARS-CoV-2 vaccines (ChAdOx1 or BNT162b2) plus an age-appropriate influenza vaccine raised no safety concerns and preserved antibody responses to both vaccines.
https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)02329-1/fulltext

Available vaccines in Europe https://www.ecdc.europa.eu/en/seasonal-influenza/prevention-and-control/vaccines/types-of-seasonal-influenza-vaccine

Vaccine composition

On 25 February 2022, WHO published recommendations for the components of influenza vaccines for use in the 2022-2023 northern hemisphere influenza season:

The WHO recommends that quadrivalent vaccines for use in the 2022-2023 influenza season in the northern hemisphere contain the following:

Egg-based Vaccines

- an A/Victoria/2570/2019 (H1N1)pdm09-like virus;
- an A/Darwin/9/2021 (H3N2)-like virus;
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus; and
- a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus.

Cell culture- or recombinant-based Vaccines

- an A/Wisconsin/588/2019 (H1N1)pdm09-like virus;
- an A/Darwin/6/2021 (H3N2)-like virus;
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus; and
- a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus.

The WHO recommends that trivalent vaccines for use in the 2022-2023 influenza season in the northern hemisphere contain the following:

Egg-based vaccines

- an A/Victoria/2570/2019 (H1N1)pdm09-like virus;

- an A/Darwin/9/2021 (H3N2)-like virus; and
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus.

Cell culture- or recombinant-based vaccines

- an A/Wisconsin/588/2019 (H1N1)pdm09-like virus;
- an A/Darwin/6/2021 (H3N2)-like virus; and
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus

On 23 September 2022, WHO published recommendations for the components of influenza vaccines for use in the 2023 southern hemisphere influenza season:

Egg-based Vaccines

- an A/Sydney/5/2021 (H1N1)pdm09-like virus;
- an A/Darwin/9/2021 (H3N2)-like virus;
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus; and
- a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus.

Cell- or recombinant-based Vaccines

- an A/Sydney/5/2021 (H1N1)pdm09-like virus;
- an A/Darwin/6/2021 (H3N2)-like virus;
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus; and
- a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus.

It is recommended that **trivalent influenza vaccines** for use in the 2023 southern hemisphere influenza season contain the following:

Egg-based vaccines

- an A/Sydney/5/2021 (H1N1)pdm09-like virus;
- an A/Darwin/9/2021 (H3N2)-like virus; and
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus.

Cell- or Recombinant-based vaccines

- an A/Sydney/5/2021 (H1N1)pdm09-like virus;
- an A/Darwin/6/2021 (H3N2)-like virus; and
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus

The full report is published here.

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Maps and commentary do not represent a statement on the legal or border status of the countries and territories shown.

All data are up to date on the day of publication. Past this date, however, published data should not be used for longitudinal comparisons, as countries retrospectively update their databases. The WHO Regional Office for Europe is responsible for the accuracy of the Russian translation.

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Tables and figures should be referenced:

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