Flu News Europe

Joint ECDC–WHO/Europe weekly influenza update

Summary

Weeks 35-39/2022 (29 August-03 October 2022)

- Influenza activity remained at interseasonal levels.
- Ten countries reported sporadic activity and Malta reported local geographic activity.
- No country reported medium intensity on influenza activity.
- Display of data will be updated on a monthly basis during the interseason period (weeks 21-39).

2021-2022 season overview

- For the Region as a whole, influenza activity reached levels well above those observed in the 2020/21 season.
- Influenza activity, based on sentinel primary care specimens from patients presenting with ILI or ARI symptoms, first peaked in week 52/2021 (reaching 19% positivity), declining thereafter until week4/2022, when it increased again reaching a plateau phase (25-30% positivity) between weeks 10 and 15/2022 (this represented late activity compared to most previous seasons) followed by a subsequent 8-week decline to 10% in week 20/2022.
- Different timings, epidemiological situations and levels of influenza activity in countries across the Region were observed over the course of the season, with A(H3) viruses being dominant in all countries.
- During the influenza Vaccine Composition Meeting for the southern hemisphere 2023 season, held in September 2022, WHO recommended updating of the A(H1)pdm09 lineage component. The full report can be found here.
- Vaccination remains the best protective measure for prevention of influenza. With increased circulation of influenza virus clinicians should consider early antiviral treatment of patients in at-risk groups with influenza virus infection, according to local guidance, to prevent severe outcomes. Viruses analyzed so far have remained susceptible to neuraminidase inhibitors and baloxavir marboxil.

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

Information on countries and areas reporting on intensity of activity and geographic spread for this week can be seen in Figures 1 and 2, respectively.

Figure 1. Intensity of influenza activity in the European Region, week 39/2022

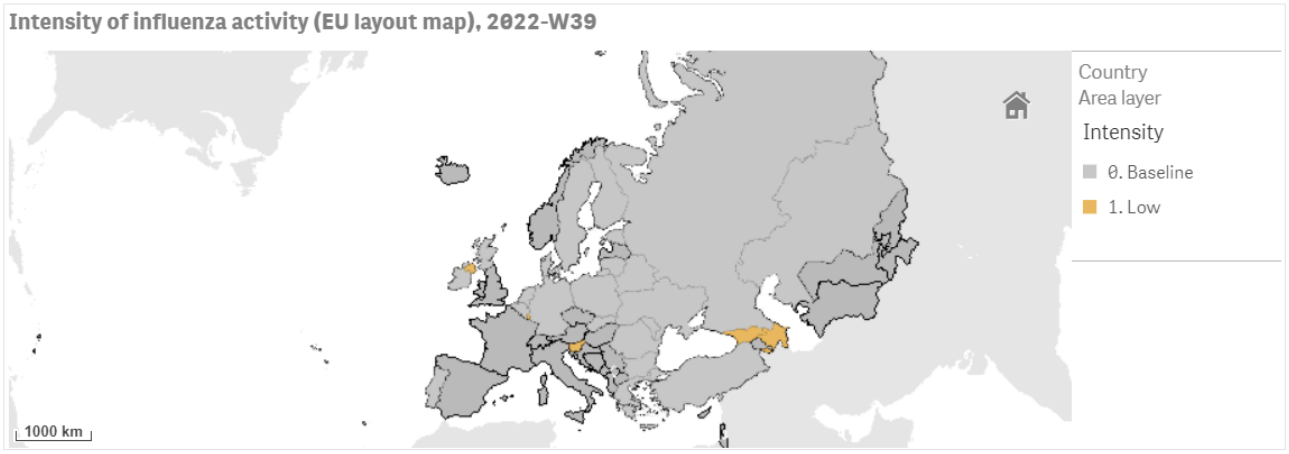
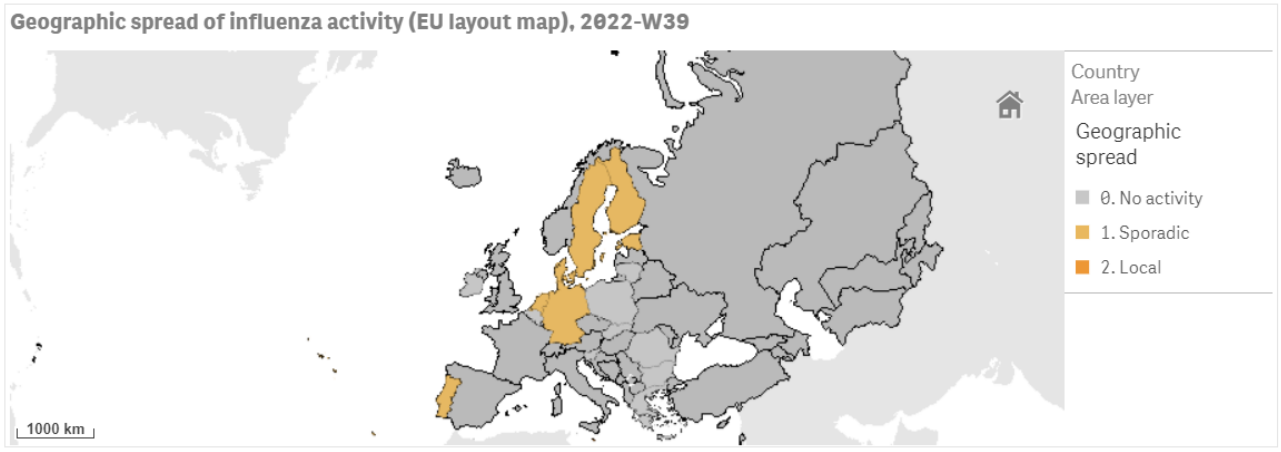


Figure 2. Geographic spread of influenza viruses in the European Region, week 39/2022



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

Please note:

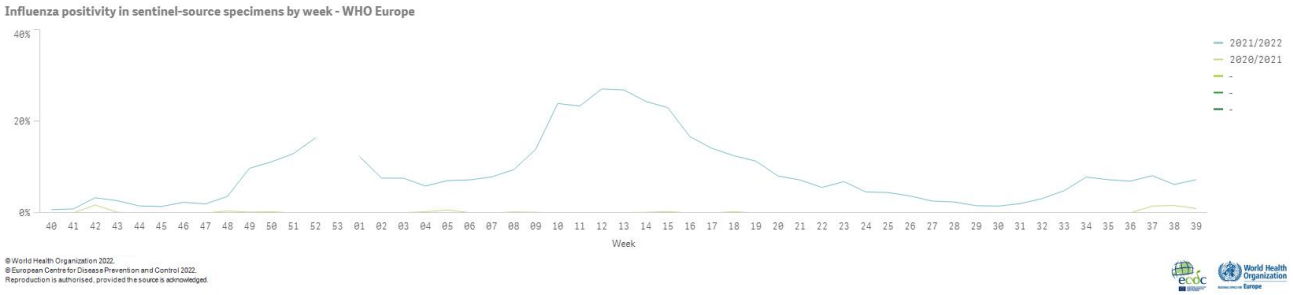
- Assessment of the intensity of activity indicator includes consideration of ILI or ARI rates. These ILI or ARI rates might be driven by respiratory infections other than influenza virus, including SARS-CoV-2, leading to observed increases in the absence of influenza virus detections.

- Assessment of intensity and geographic spread indicators includes consideration of sentinel and non-sentinel influenza virus detection data. Non-sentinel influenza virus detections, 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 specimens remained below the epidemic threshold, which is set at 10% (Fig. 3).

Figure 3. Influenza virus positivity in sentinel-source specimens by week, WHO European Region, seasons 2020/2021-2021/2022



External data sources

Mortality monitoring: Please refer to the EuroMOMO project for additional information.

Primary care data

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

Please refer to respective Table 1 and Figure 4, respectively, for additional information on sentinel specimens tested for influenza viruses for this week.

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

Figure 4. Influenza virus detections in sentinel-source specimens by type and subtype, and week for weeks 40/2020-39/2022

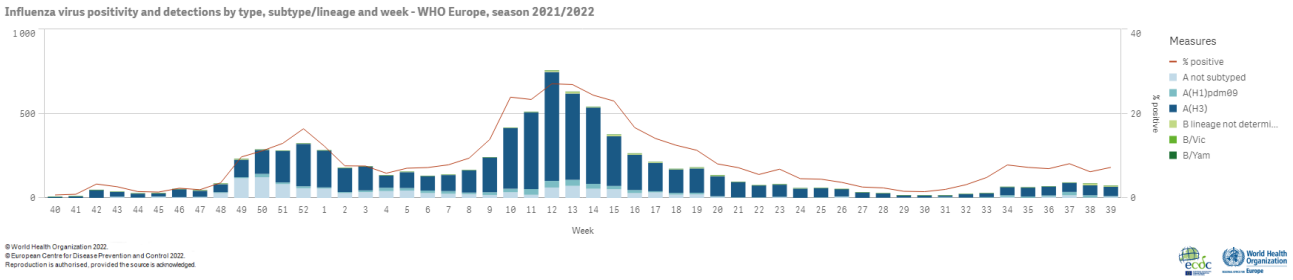


Table 1. Influenza virus detections in sentinel-source specimens by type and subtype, week 39/2022 and cumulatively

	Current Week (39)		Weeks 40/2021 - 39/2022	
Virus type and subtype	**Number**	**%[a]**	**Number**	**%[a]**
Influenza A	66	90.4	**8 172**	**98.4**
A(H1)pdm09	4	6.8	477	6.9
A(H3)	55	93.2	6 478	93.1
A not subtyped	7	-	1 217	-
Influenza B	**7**	**9.6**	**137**	**1.6**
B/Victoria lineage	0	-	24	100

B/Yamagata lineage	0	-	0	0.0
Unknown lineage	7	-	113	-
Total detections (total tested)	**73 (1 006)**	**7.3**	**8 309 (85 293)**	**9.7**

[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)

Please refer to the respective Figures 5 and 6, respectively, below for more information for this week.

Figure 5. Number of laboratory-confirmed hospitalized influenza cases in intensive care units (ICU) by week of reporting, WHO Europe, season 2021/2022

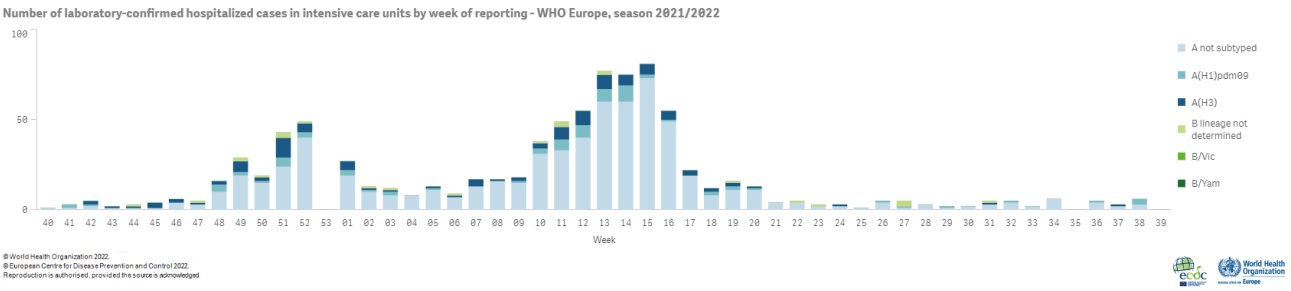
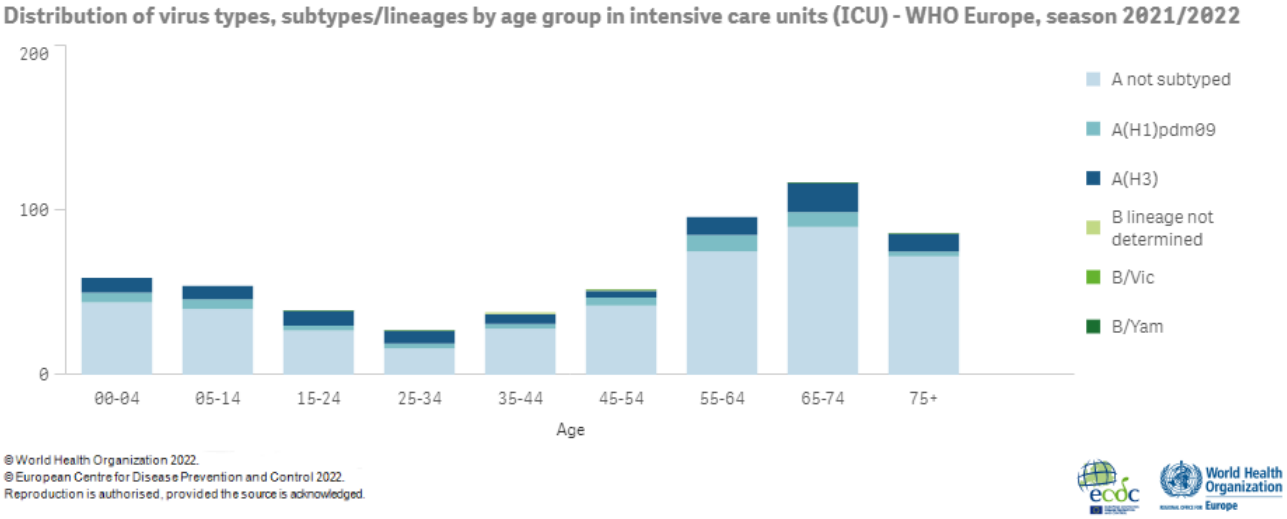


Figure 6. Distribution of influenza virus types, subtypes/lineages by age group in intensive care units (ICU), WHO Europe, season 2021/2022



1.2) Hospitalized laboratory-confirmed influenza cases – other wards

Please refer to the respective Figures 7 and 8, respectively, for more information for this week.

Figure 7. Number of laboratory-confirmed hospitalized influenza cases in wards other than intensive care units (non-ICU) by week of reporting, WHO Europe, season 2021/2022

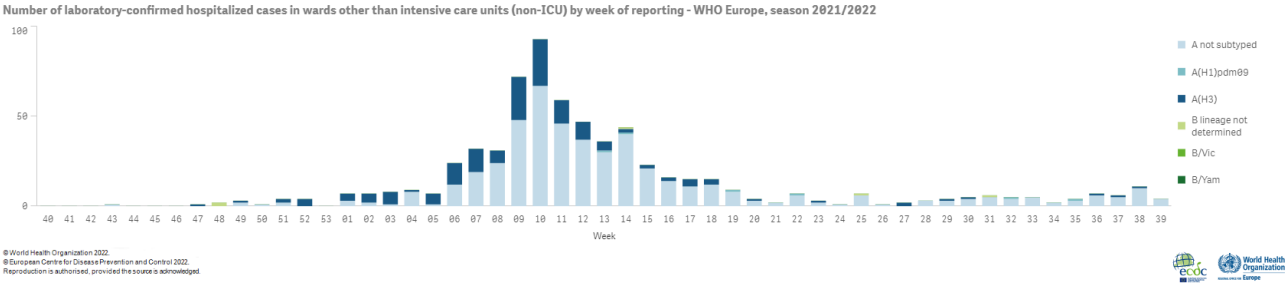
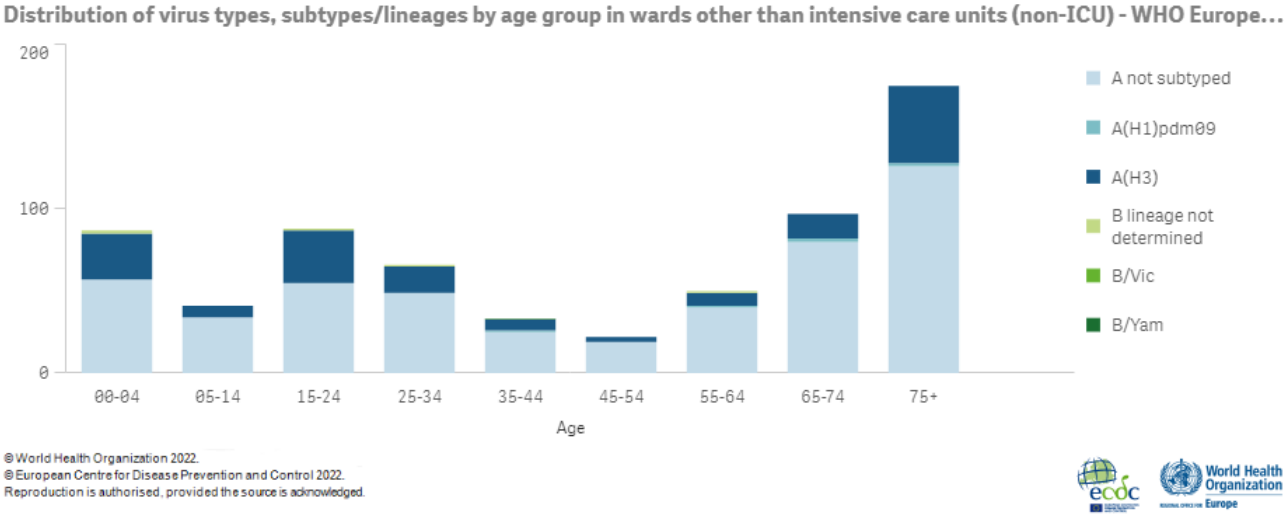


Figure 8. Distribution of influenza virus types, subtypes/lineages by age group in wards other than intensive care units (non-ICU), WHO Europe, season 2021/2022



Severe acute respiratory infection (SARI)-based hospital surveillance

Please refer to Figures 9 and 10, respectively, for more information for this week.

Figure 9. Number of severe acute respiratory infection (SARI) cases (bar) and positivity for influenza and COVID-19 (point/line) by week of reporting, WHO Europe, season 2021/2022

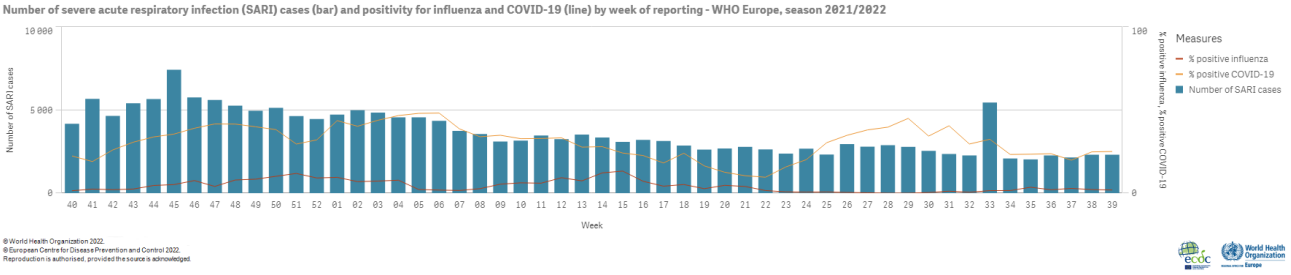
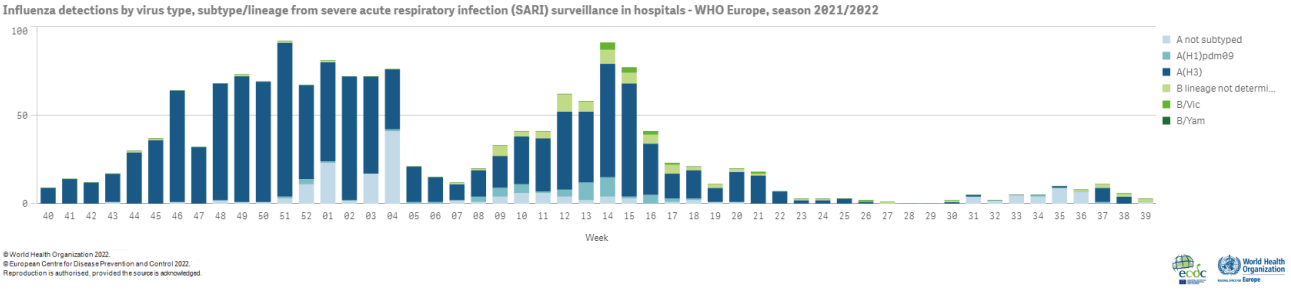


Figure 10. Influenza virus detections by type, subtype/lineage from severe acute respiratory infection (SARI), WHO Europe, season 2021/2022



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

Please refer to Figure 11 and Table 2, respectively, for additional information on non-sentinel specimens tested for influenza viruses for this week.

Figure 11. Influenza detections by type, subtype/lineage and week, WHO Europe, season 2021/2022

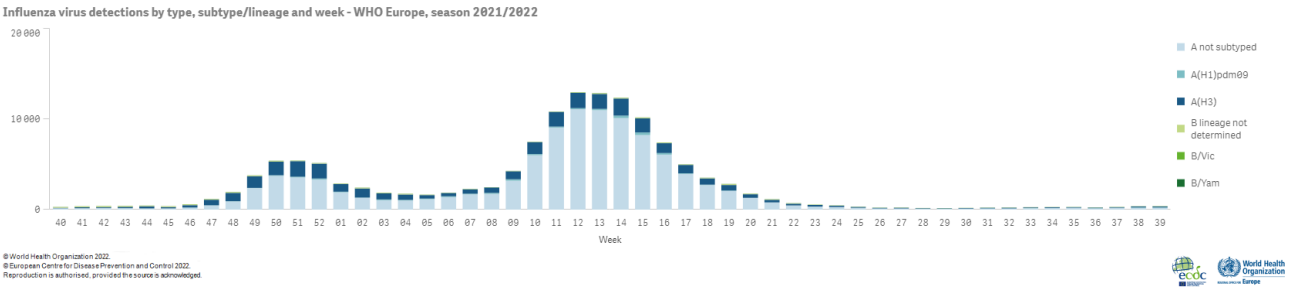


Table 2. Influenza virus detections in non-sentinel-source specimens by type and subtype, week 39/2022 and cumulatively

	Current Week (39)	Weeks 40/2021-39/2022

Virus type and subtype	Number	%[a]	Number	%[a]
Influenza A	344	**94.2**	**138 319**	**98.1**
A(H1)pdm09	47	32.6	3 010	9.2
A(H3)	97	67.4	29 882	90.8
A not subtyped	200	-	105 427	-
Influenza B	**21**	**5.8**	**2 744**	**1.9**
B/Victoria lineage	0	-	130	98.5
B/Yamagata lineage	0	-	2	1.5
Unknown lineage	21	-	2 612	-
Total detections (total tested)	**365 (22 270)**	**-**	**141 063 (3 165 913)**	**-**

[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

Please refer to Table 3 for additional information on viruses that have been characterised genetically.

Table 3. Number of influenza viruses attributed to genetic groups, cumulative for the influenza weeks 40/2021-39/2022

Number of influenza viruses attributed to genetic groups, cumulative for the season - WHO Europe

Virus Type	Virus Subtype	Genetic charact...	Number of influenza viruses attributed to genetic groups 2021/2022
Total			**5 355**
Influenza A			**5 247**
	A(H1)pdm09		**429**
		A/Guangdong-Maonan/SWL1536/2019(H1N1)pdm09_6B.1A.5a.1	373
		A/India/Pun-NIV312851/2021(H1N1)pdm09_6B.1A.5a.2	23
		A/Victoria/2570/2019(H1N1)pdm09_6B.1A.5a.2	33
	A(H3)		**4 818**
		A(H3)_NOClade *	2
		A(H3)_SubgroupNotListed *	26
		A/Bangladesh/4005/2020(H3)_3C.2a1b.2a.2	4 766
		A/Cambodia/e0826360/2020(H3)_3C.2a1b.2a.1	3
		A/Denmark/3264/2019(H3N2)_3C.2a1b.1a	21
Influenza B			**108**
	B/Vic		**101**
		B/Austria/1359417/2021(Victoria lineage_1A.3a.2)	65
		B/Victoria_NOClade *	1
		B/Washington/02/2019(Victoria lineage_1A.3)	33
		BVic_SubgroupNotListed *	2
	B/Yam		**7**
		B/Phuket/3073/2013(Yamagata lineage_3)	4
		B/Yamagata_NOClade *	3

** No Clade: not attributed to a pre-defined clade and SubgroupNotListed: attributed to recognised group in current guidance but not listed here*

ECDC published the May virus characterization report that describes the available data from circulating viruses this influenza season: currently type A influenza virus circulation was dominating over type B, due mainly to A(H3) viruses. Vaccination remains the best protective measure for prevention of influenza. However, based on post-infection ferret antisera data, the predominant A(H3N2) viruses in circulation are not well recognized by antisera raised against viruses genetically and antigenically similar to the vaccine virus, indicating antigenic diversity. Therefore, it is possible that the A(H3) vaccine component may induce less good recognition of the prevalent A(H3) viruses, although preliminary VE data indicates a still moderate level of protection against laboratory confirmed infection. Clinicians should therefore consider early antiviral treatment of at-risk groups with influenza infection, according to local guidance, to prevent severe outcomes.

Antiviral susceptibility testing

Between weeks 35 and 39/2022, 14 viruses were assessed for susceptibility to neuraminidase inhibitors and 14 were assessed for susceptibility to baloxavir marboxil. Phenotypically and genotypically, no markers associated with reduced susceptibility 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 preserves 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 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.

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

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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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