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

Summary

Week 41/2022 (10 October-16 October 2022)

- Germany and United Kingdom (Scotland) reported regional influenza spread and Kazakhstan reported widespread influenza activity.
- The percentage of all sentinel primary care specimens from patients presenting with ILI or ARI symptoms that tested positive for an influenza virus increased to 4% from 3% in the previous week, which is below the epidemic threshold set at 10%.
- Germany, with a rate of 13%, was the only country to report seasonal influenza activity above 10% positivity in sentinel primary care.
- Both influenza type A and type B viruses were detected among all monitoring systems.
- Both type A and type B viruses were detected among hospitalized patients with laboratory confirmed influenza.

2022-2023 season overview

- For the Region as a whole, influenza activity was at inter-seasonal levels.

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 41/2022, of 41 countries and areas reporting on intensity of influenza activity, 30 reported baseline-intensity (across the Region), 9 reported low-intensity (across the Region), 1 reported medium-intensity (Kazakhstan) and 1 reported high-intensity (Malta) (Fig. 1).

Of 41 countries and areas reporting on geographic spread of influenza viruses, 20 reported no activity (across the Region), 17 reported sporadic spread (across the Region), 1 reported local spread (Malta), 2 reported regional spread (Germany and United Kingdom (Scotland)) and 1 reported widespread activity (Kazakhstan) (Fig. 2).

Figure 1. Intensity of influenza activity in the European Region, week 41/2022

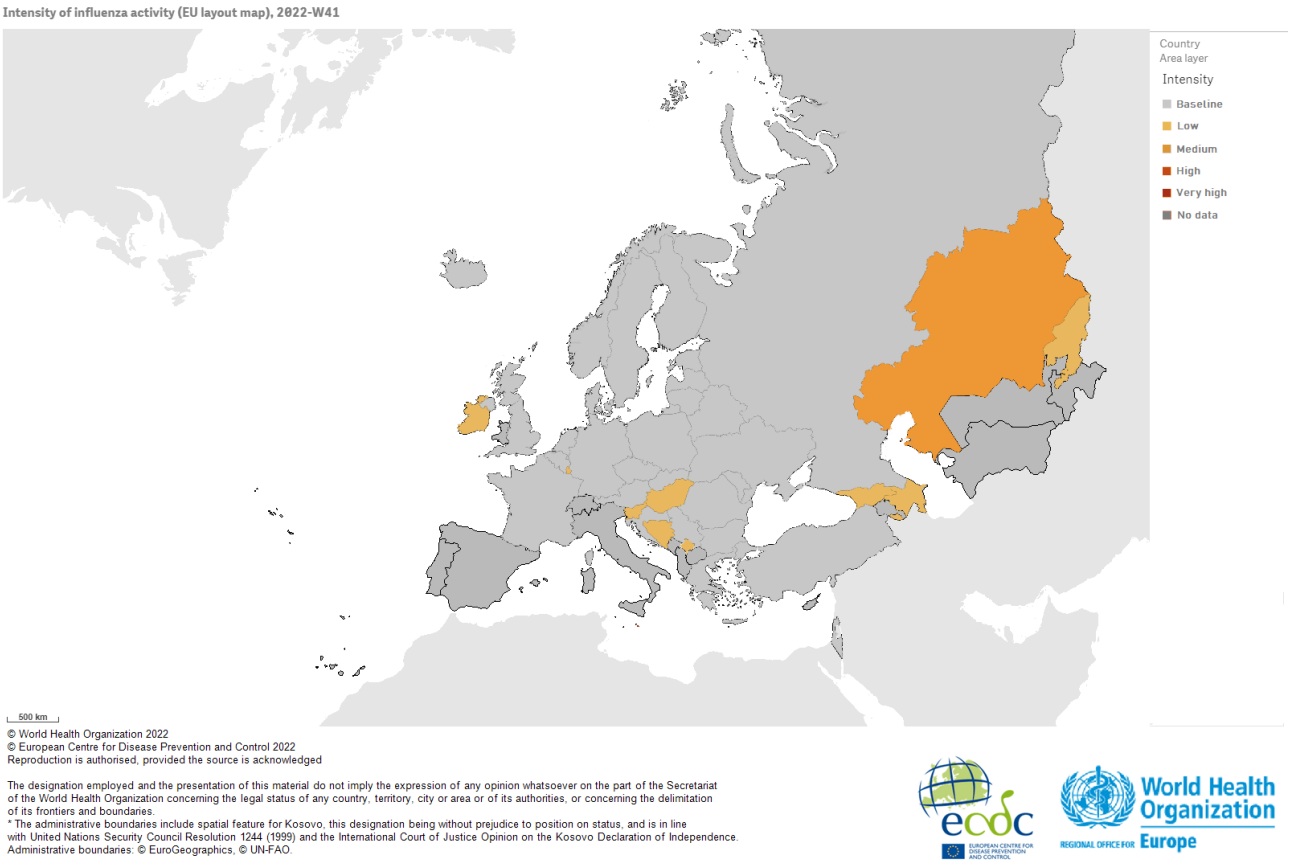
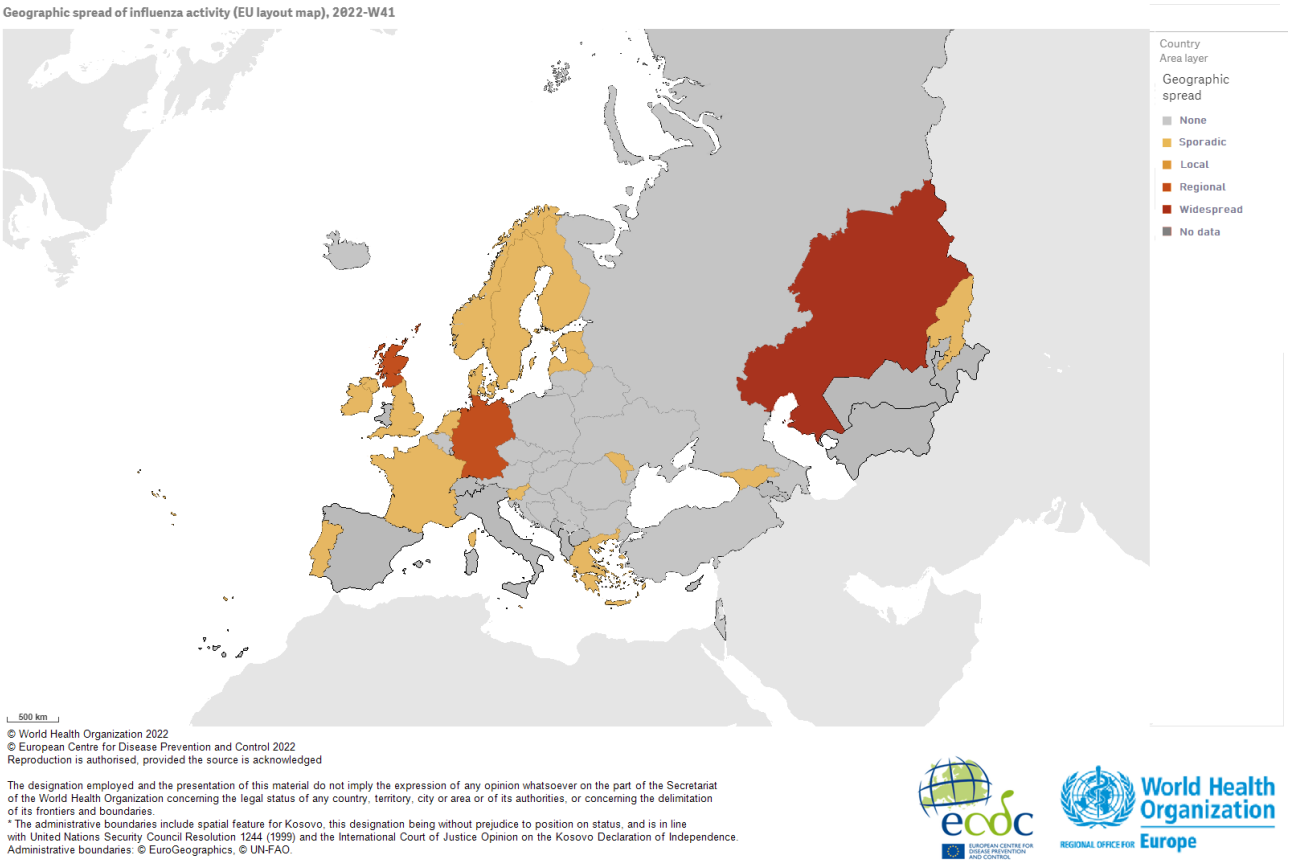


Figure 2. Geographic spread of influenza viruses in the European Region, week 41/2022



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

Please note:

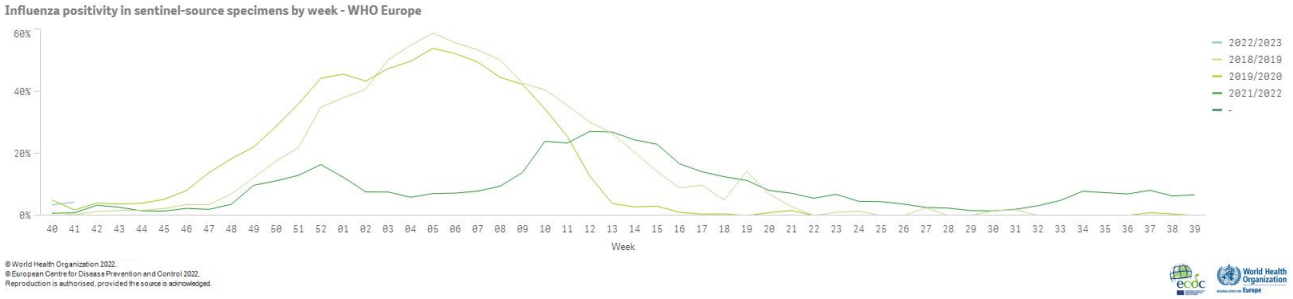
- Assessment of the intensity of activity indicator includes consideration of ILI or ARI rates. These ILI or ARI rates might be driven by respiratory infections other than influenza virus, including SARS-CoV-2, leading to observed increases in the absence of influenza virus detections.

- 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 primary care specimens increased from 3% in the previous week to 4% in week 41/2022 and remained below the epidemic threshold, which is set at 10% (Fig. 3).

Figure 3. Influenza virus positivity in sentinel-source specimens by week, European Region, seasons 2018/2019, 2019/2020, 2021/2022 and 2022/2023



External data sources

Mortality monitoring:

This week's overall pooled EuroMOMO estimates of all-cause mortality for the participating European countries show elevated excess mortality. Data from 24 European countries or subnational regions were included in this week's pooled analysis of all-cause mortality.

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

Primary care data

Syndromic surveillance data

Of the countries and areas in which thresholds for ILI activity are defined, countries in eastern (Azerbaijan, Georgia, Kazakhstan and Kyrgyzstan), northern (Denmark and Estonia), southern (Turkey) and western (Austria, Belgium, Hungary 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 Kyrgyzstan), northern (Latvia) and southern (Romania and Slovenia) 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) method and based on historic ILI/ARI data.

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

For week 41/2022, 41 (4%) of 956 sentinel specimens tested positive for an influenza virus, of which 98% were type A and 2% was type B. Of 33 subtyped A viruses, 85% were A(H3) and 15% A(H1)pdm09 (Fig. 4 and Table 1). Of 19 countries and areas across the Region that each tested at least 10 sentinel specimens in week 41/2022, only Germany reported a positivity rate (13%) above the epidemic threshold of 10%.

For the season to date, 77 (4%) of 2 005 sentinel specimens tested positive for an influenza virus. More influenza type A (n=75, 97%) than type B (n=2, 3%) viruses have been detected. Of 65 subtyped A viruses, 49 (75%) were A(H3) and 16 (25%) were A(H1)pdm09. The influenza 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

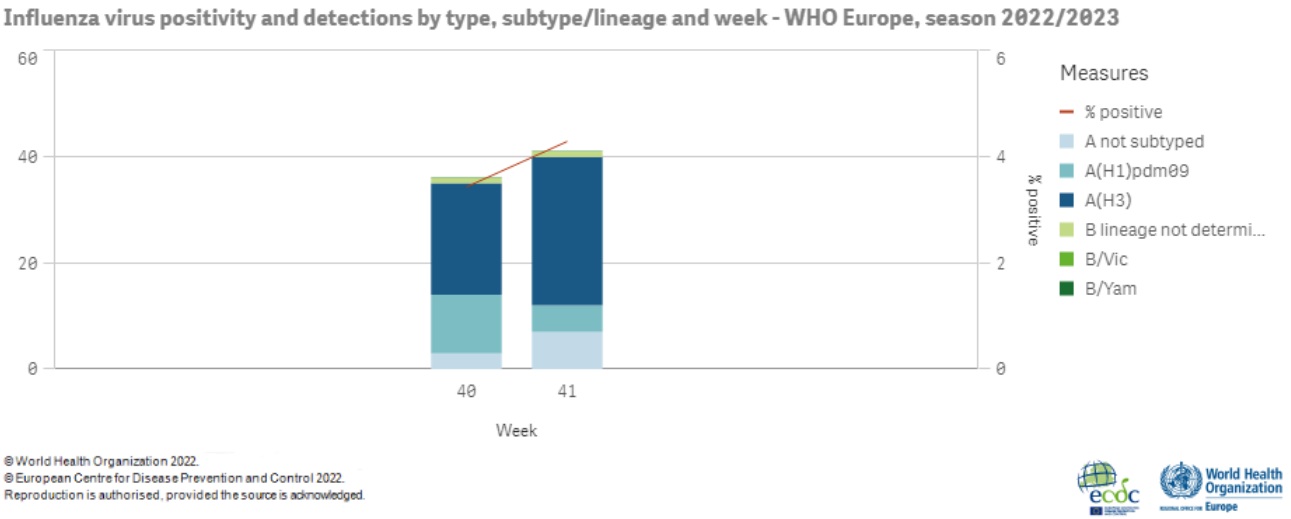


Table 1 Influenza virus detections in sentinel source specimens by type and subtype for week 41/2022 and cumulatively for the season

Sentinel	Current Week (41)		Season 2022-2023	
Virus type and subtype	**Number**	**%[a]**	**Number**	**%[a]**
Influenza A	**40**	**97.6**	**75**	**97.4**
A(H1)pdm09	5	15.2	16	24.6
A(H3)	28	84.8	49	75.4
A not subtyped	7	-	10	-
Influenza B	**1**	**2.4**	**2**	**2.6**
B/Victoria lineage	0	-	0	-
B/Yamagata lineage	0	-	0	-
Unknown lineage	1	-	2	-
Total detections (total tested)	**41 (956)**	**4.3**	**77 (2 005)**	**3.8**

[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 41/2022 (Fig. 7 and 8).

Since week 40/2022, more influenza type A (n=11, 85%) than type B (n=2, 15%) viruses were detected (from Ireland and United Kingdom (England)). Of 3 subtyped influenza A viruses, 2 were A(H3) and 1 was A(H1)pdm09. No influenza B viruses were ascribed to a lineage. The only case with known age was within the age group 65 years and older.

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

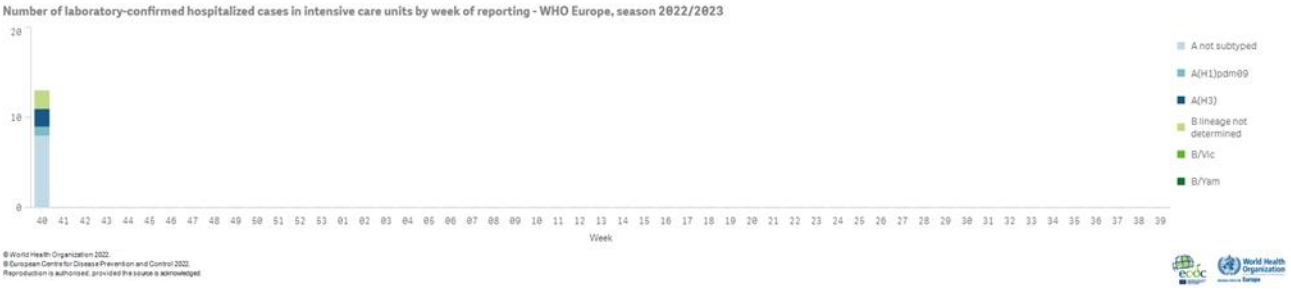
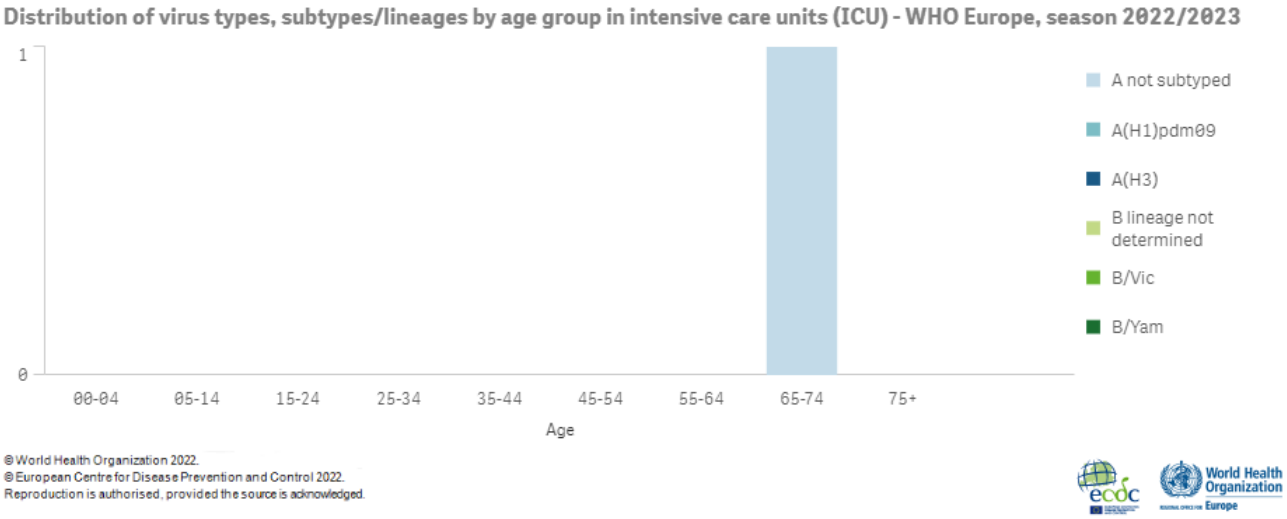


Figure 6. Distribution of influenza virus types, subtypes/lineages by age group in intensive care units (ICU), WHO European Region, season 2022/2023



1.2) Hospitalized laboratory-confirmed influenza cases – other wards

For week 41/2022, 13 laboratory-confirmed influenza cases were reported from other wards in Ireland. All detected influenza viruses belonged to type A (100%). None of these viruses were ascribed to a subtype (Fig. 7 and 8).

Since week 40/2022, 42 influenza type A viruses and 3 influenza type B viruses were detected from Ireland. The only subtyped influenza A virus was A(H1)pdm09. The 45 cases with known age fell in 4 age groups: 19 were 15-64 years old, 15 were 65 years and older, 9 were 5-14 years old and 2 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

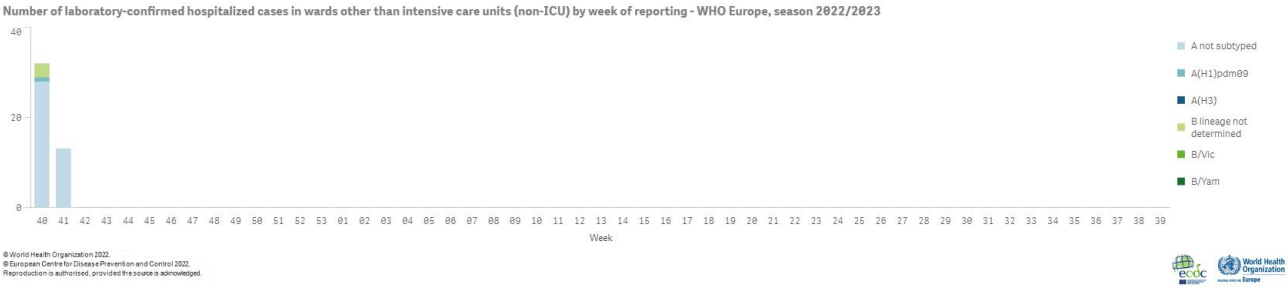
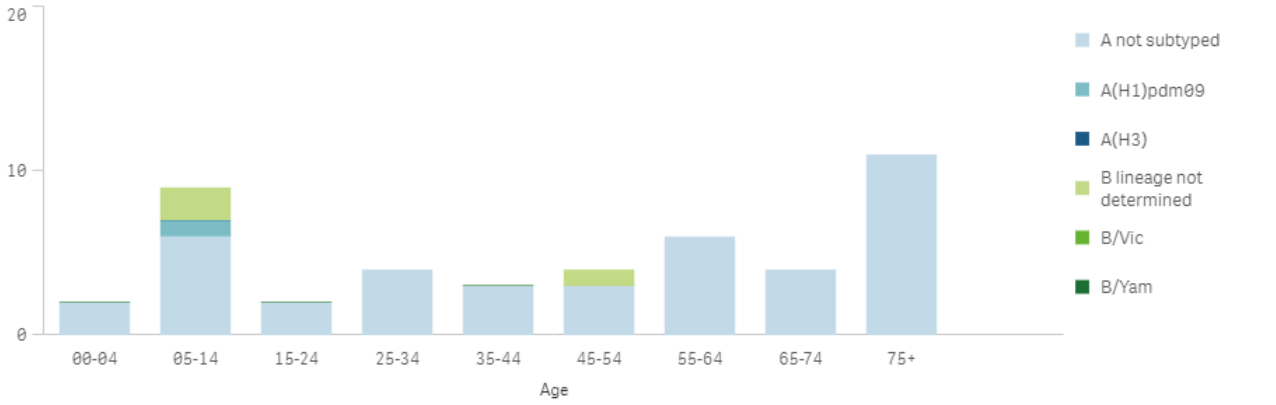


Figure 8. Distribution of influenza virus types, subtypes/lineages by age group in wards other than intensive care units (non-ICU), WHO European Region, season 2022/2023

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



Severe acute respiratory infection (SARI)-based hospital surveillance

For week 41/2022, 2 621 SARI cases were reported by 16 countries or areas. Of 205 specimens tested for influenza viruses, 2.4% (n=5) were positive. Of these, influenza type B viruses (n=3) were detected more frequently than influenza type A viruses (n=2).

For the season, 5 400 SARI cases were reported by 17 countries or areas. For 9 SARI cases testing positive for influenza virus since week 40/2022, 5 viruses were type A and 4 were type B viruses. Of 4 subtyped influenza A viruses, 2 were A(H3) and 2 were A(H1)pdm09 virus. No influenza B viruses were ascribed to a lineage (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

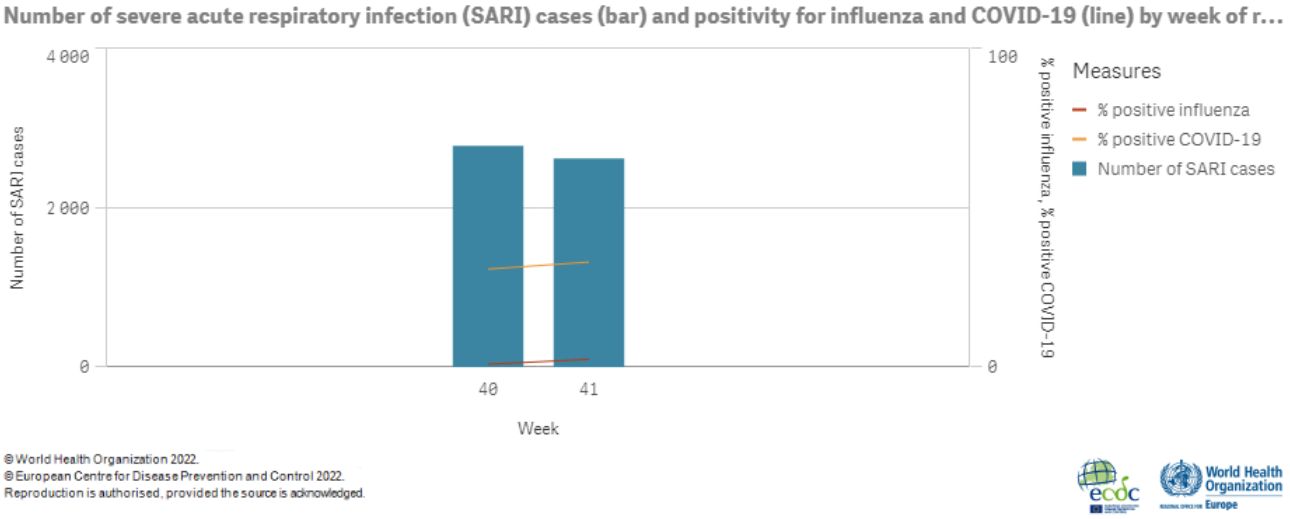
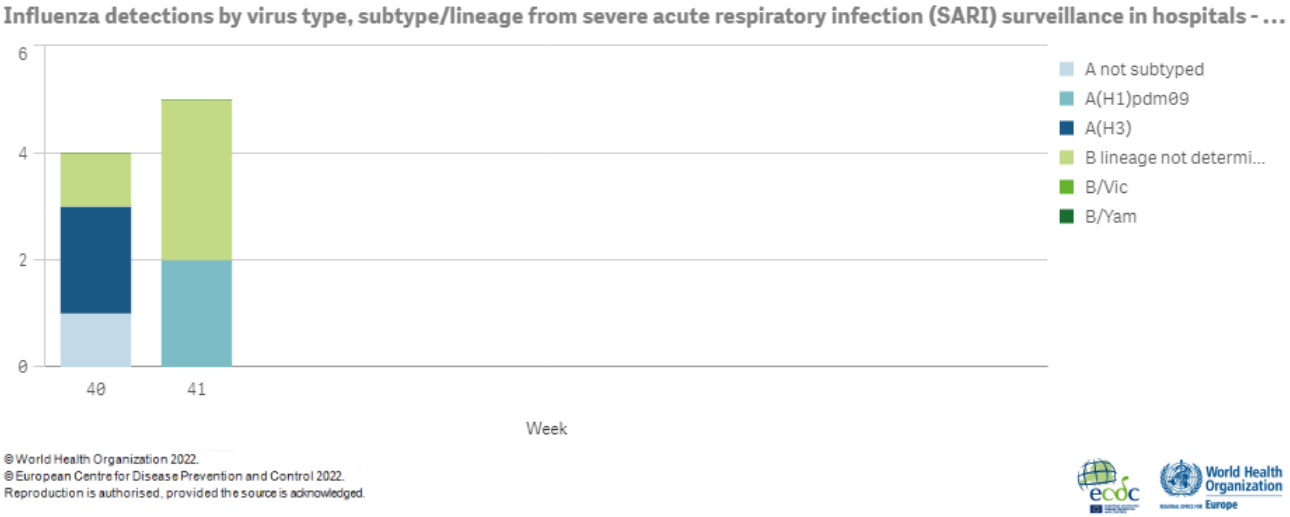


Figure 10. Influenza virus detections by type, subtype/lineage from severe acute respiratory infection (SARI), WHO European Region, season 2022/2023



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 41/2022, 398 of 31 588 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 an influenza virus; 360 (90%) were type A and 38 (10%) were type B. Of 98 subtyped A viruses, 52 (53%) were A(H1)pdm09 and 46 (47%) A(H3). Of 4 type B viruses ascribed to a lineage, all were Victoria lineage (Fig. 11 and Table 2).

For the season to date, more influenza type A (n=788, 92%) than type B (n=64, 8%) viruses have been detected. Of 274 subtyped A viruses, 160 (58%) were A(H3) and 114 (42%) were A(H1)pdm09. Of 5 influenza type B viruses ascribed to a lineage, all were B/Victoria (92% 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 41/2022 and cumulatively for the season

Non-Sentinel	Current Week (41)		Season 2022-2023	
Virus type and subtype	**Number**	**%[a]**	**Number**	**%[a]**
Influenza A	360	**90.5**	**788**	**92.5**
A(H1)pdm09	52	53.1	114	41.6
A(H3)	46	46.9	160	58.4
A not subtyped	262	-	514	-
Influenza B	**38**	**9.5**	**64**	**7.5**
B/Victoria lineage	4	100	5	100
B/Yamagata lineage	0	-	0	-

Unknown lineage	34	-	59	-
Total detections (total tested)	**398 (31 588)**		**852 (65 917)**	

[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

The only genetically characterized A(H1)pdm09 virus up to week 41/2022, belonged to clade 6B.1A.5a.2, represented by A/Victoria/2570/2019.

ECDC published the May virus characterization report that describes the available data from circulating viruses during the 2021-2022 influenza season: 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.
This and previously published influenza virus characterization reports are available on the ECDC website.

Antiviral susceptibility testing

Up to week 41/2022, 3 viruses were assessed for susceptibility to neuraminidase inhibitors (2 A(H3) and 1 A(H1)pdm09 genotypically), and 1 virus was assessed for susceptibility to baloxavir marboxil (1 A(H1)pdm09 genotypically). 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 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 2022 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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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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