

Summary

Week 42/2022 (17 October-23 October 2022)

- Two countries in the Region reported widespread influenza activity, Kazakhstan and United Kingdom (Scotland).
- The percentage of all sentinel primary care specimens from patients presenting with ILI or ARI symptoms that tested positive for an influenza virus decreased to 6% from 7% in the previous week, which is below the epidemic threshold set at 10%.
- Germany, Kazakhstan, Portugal and Spain reported seasonal influenza activity above 10% positivity in sentinel primary care.
- Of 339 SARI cases tested for influenza, 64 were positive, 59 (92%) of which were infected with influenza type B viruses.
- For the season, among the SARI influenza B positive cases ascribed to a lineage, all were B/Victoria.
- 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.
- Both type A and type B viruses were detected among hospitalized patients with laboratory confirmed influenza, with A(H3) viruses dominating in both ICU and non-ICU wards while type B viruses dominated in data from SARI surveillance. However, it is important to consider that data for ICU, non-ICU and SARI cases come from different countries so, although differences in virus circulation may be attributable to geographical differences, there is insufficient data to make a definite conclusion.

2022-2023 season overview

- For the Region as a whole, influenza activity remained at inter-seasonal levels with signs of slowly increasing activity.
- Overall, influenza A(H3) viruses have dominated across the 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 42/2022, of 40 countries and areas reporting on intensity of influenza activity, 31 reported baseline-intensity (across the Region), and 8 reported low-intensity (Azerbaijan, Denmark, Estonia, Hungary, Ireland, Kosovo (in accordance with UN Security Council Resolution 1244 (1999)), Luxembourg and Slovenia), and 1 reported high-intensity (Malta) (Fig. 1).

Of 40 countries and areas reporting on geographic spread of influenza viruses, 17 reported no activity (across the Region), 17 reported sporadic spread (across the Region), 3 reported local spread (Belarus, Malta and United Kingdom (Northern Ireland)), 1 reported regional spread (Germany) and 2 reported widespread activity (Kazakhstan and United Kingdom (Scotland)) (Fig. 2).

Figure 1. Intensity of influenza activity in the European Region, week 42/2022

Intensity of influenza activity (EU layout map), 2022-W42

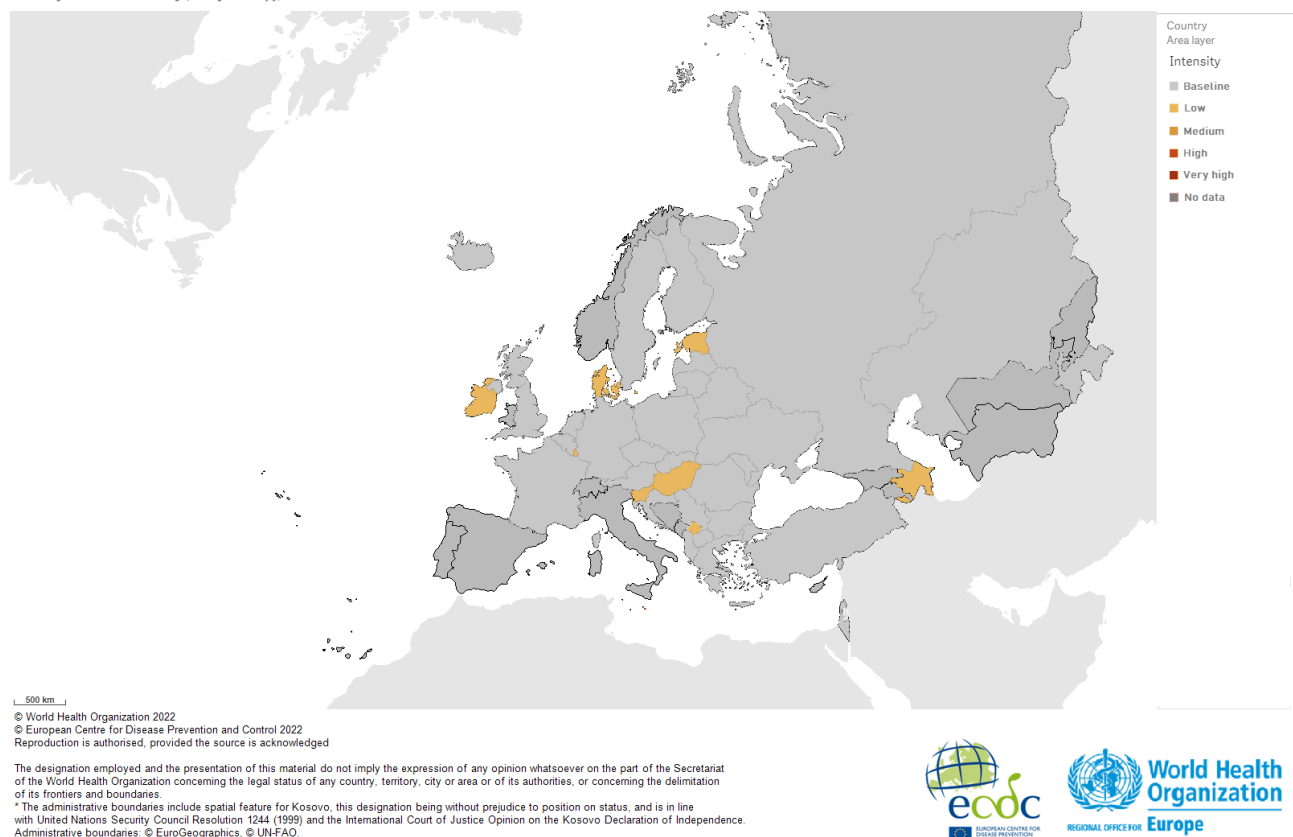
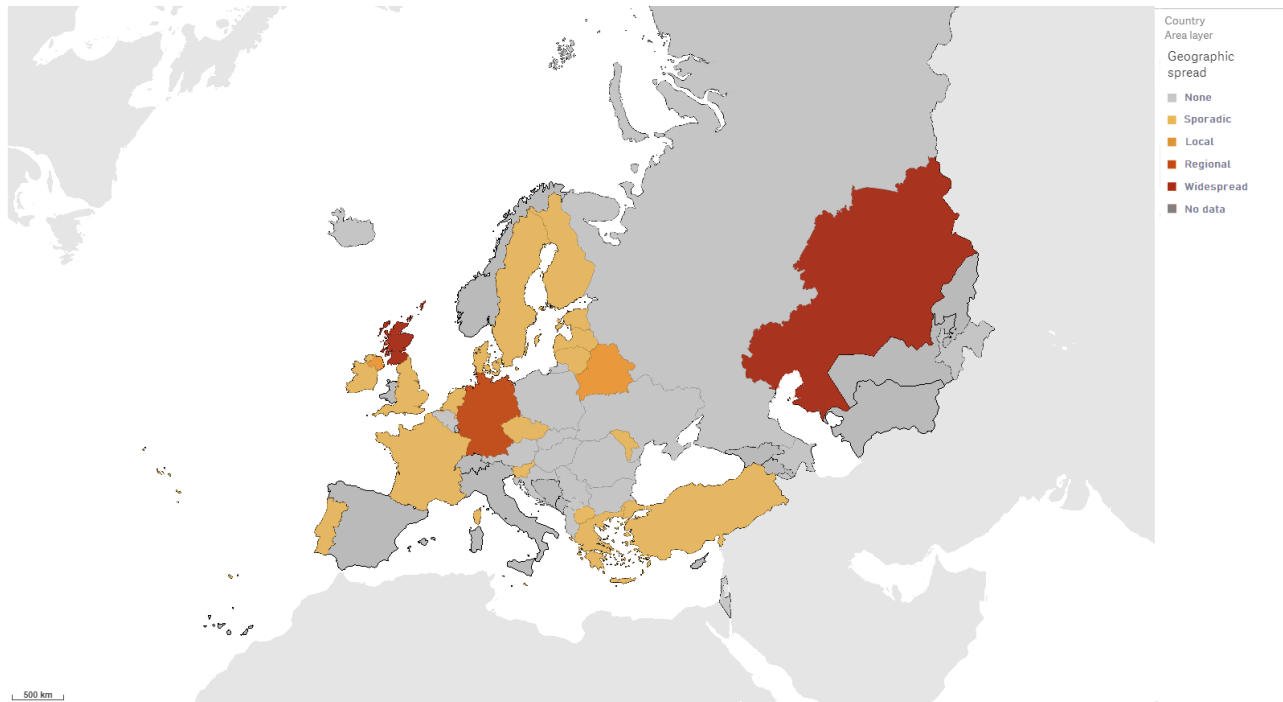


Figure 2. Geographic spread of influenza viruses in the European Region, week 42/2022



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* The administrative boundaries include spatial feature for Kosovo, this designation being without prejudice to position on status, and is in line with United Nations Security Council Resolution 1244 (1999) and the International Court of Justice Opinion on the Kosovo Declaration of Independence.
Administrative boundaries: © EuroGeographics, © UN-FAO.



For interactive maps of influenza intensity and geographic spread, see the [Flu News Europe website](#).

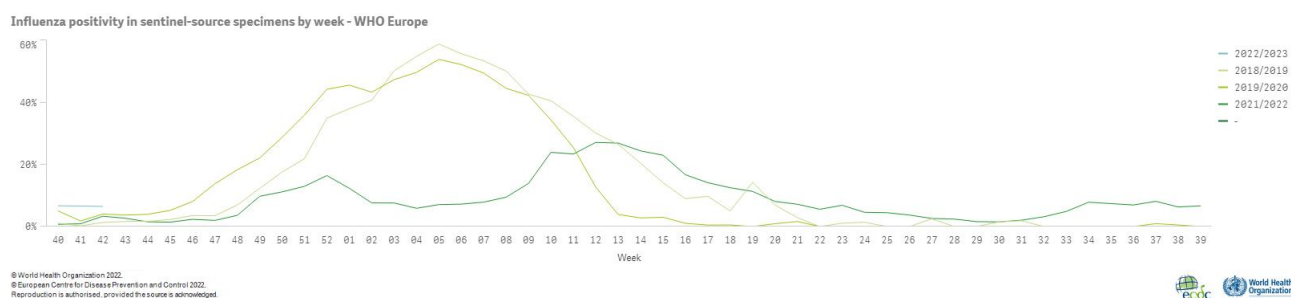
Please note:

- 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 decreased from 7% in the previous week to 6% in week 42/2022, which is below the epidemic threshold 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:

For week 42/2022 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/>

Primary care data

Syndromic surveillance data

Of the countries and areas in which thresholds for ILI activity are defined, countries in eastern (Azerbaijan, Kazakhstan and Tajikistan), 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), northern (Latvia) and southern (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) and based on historic ILI/ARI data.

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

For week 42/2022, 135 (6%) of 2 084 sentinel specimens tested positive for influenza virus; 90% were type A and 10% were type B. Of 92 subtyped A viruses, 90% were A(H3) and 10% A(H1)pdm09. Of five type B viruses ascribed to a lineage, all were B/Victoria (Fig. 4 and Table 1). Of 23 countries and areas across the Region that each tested at least 10 sentinel specimens in week 42/2022, four reported a rate of influenza virus detections at or above 10%: Germany (16%), Portugal (15%), Kazakhstan (11%) and Spain (10%).

For the season to date, 386 (7%) of 5 862 sentinel specimens tested positive for an influenza virus. More influenza type A (n=345, 89%) than type B (n=41, 11%) viruses have been detected. Of 278 subtyped A viruses, 238 (86%) were A(H3) and 40 (14%) were A(H1)pdm09. Of 26 influenza type B viruses ascribed to a lineage, all were B/Victoria (37% 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

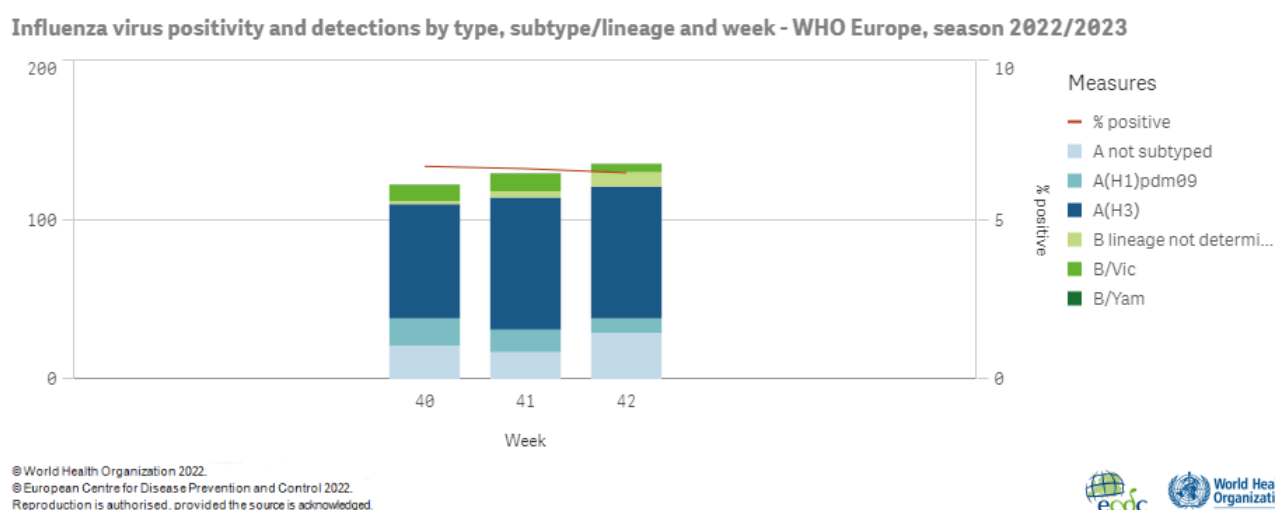


Table 1 Influenza virus detections in sentinel source specimens by type and subtype for week 42/2022 and cumulatively for the season

Sentinel	Current Week (42)		Season 2022-2023	
Virus type and subtype	Number	% ^a	Number	% ^a
Influenza A	121	89.6	345	89.4
A(H1)pdm09	9	9.8	40	14.4
A(H3)	83	90.2	238	85.6
A not subtyped	29	-	67	-
Influenza B	14	10.4	41	10.6
B/Victoria lineage	5	100	26	100
B/Yamagata lineage	0	0	0	0
Unknown lineage	9	-	15	-
Total detections (total tested)	135 (2 084)	6.5	386 (5 862)	6.6

^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)

For week 42/2022, 34 laboratory-confirmed influenza cases were reported from ICU wards (in Ireland, Sweden and United Kingdom (England)). Both influenza type A viruses (n=88%) and type B viruses (n=12%) were detected (Fig. 5 and 6). No viruses were ascribed to a subtype or lineage.

Since week 40/2022, more influenza type A (n=69, 90%) than type B (n=8, 10%) viruses were detected (from Ireland, Sweden and United Kingdom (England)). Of 5 subtyped influenza A viruses, 3 were A(H1)pdm09 and 2 were A(H3). No influenza B viruses were ascribed to a lineage. Of 4 cases with known age, 3 were 65 years and older and 1 was 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

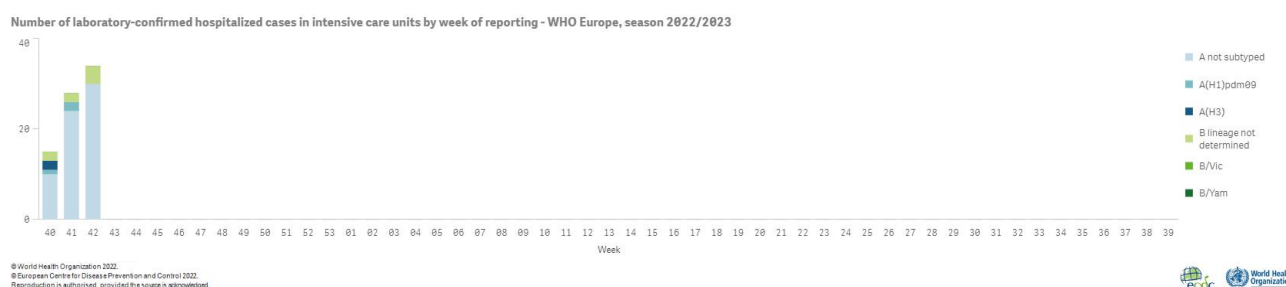
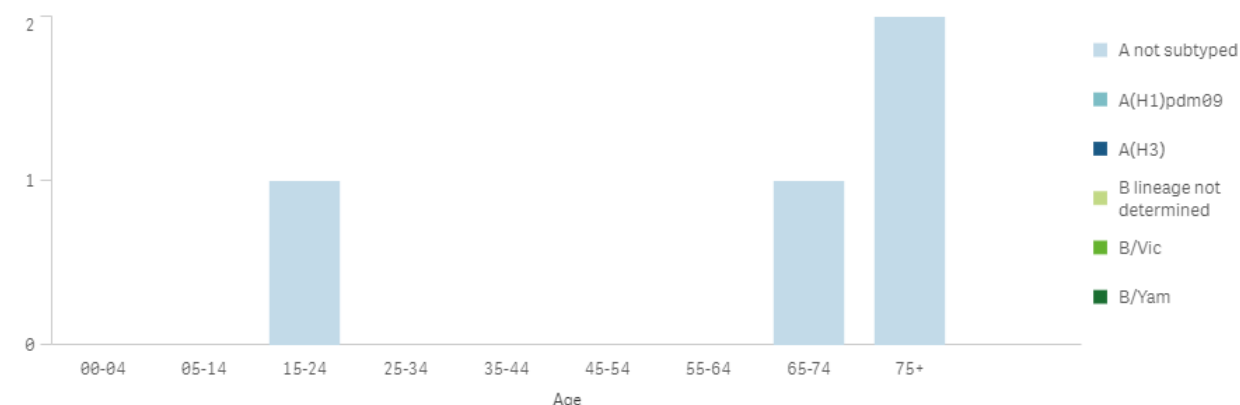


Figure 6. Distribution of influenza virus types, subtypes/lineages by age group in intensive care units (ICU), WHO European Region, season 2022/2023

Distribution of virus types, subtypes/lineages by age group in intensive care units (ICU) - WHO Europe, season 2022/2023



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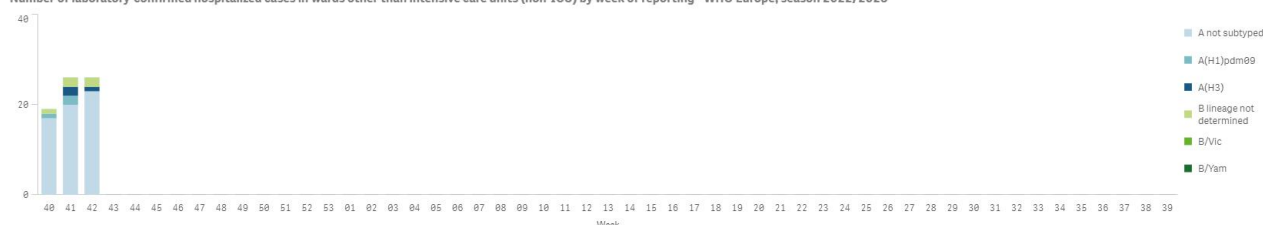
1.2) Hospitalized laboratory-confirmed influenza cases – other wards

For week 42/2022, 26 laboratory-confirmed influenza cases were reported from other wards in Ireland; influenza type A viruses (92.3%) were detected more frequently than influenza type B viruses (7.7%). The one influenza type A virus assigned to a subtype was A(H3) (Fig. 7 and 8).

Since week 40/2022, 66 influenza type A viruses and 5 influenza type B viruses were detected from Ireland. Of 6 subtyped influenza A viruses, three were A(H1)pdm09 and three A(H3). The 71 cases with known age fell in four age groups: 28 were 15-64 years old, 24 were 65 years and older, 15 were 5-14 years old and four 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

Number of laboratory-confirmed hospitalized cases in wards other than intensive care units (non-ICU) by week of reporting - WHO Europe, season 2022/2023

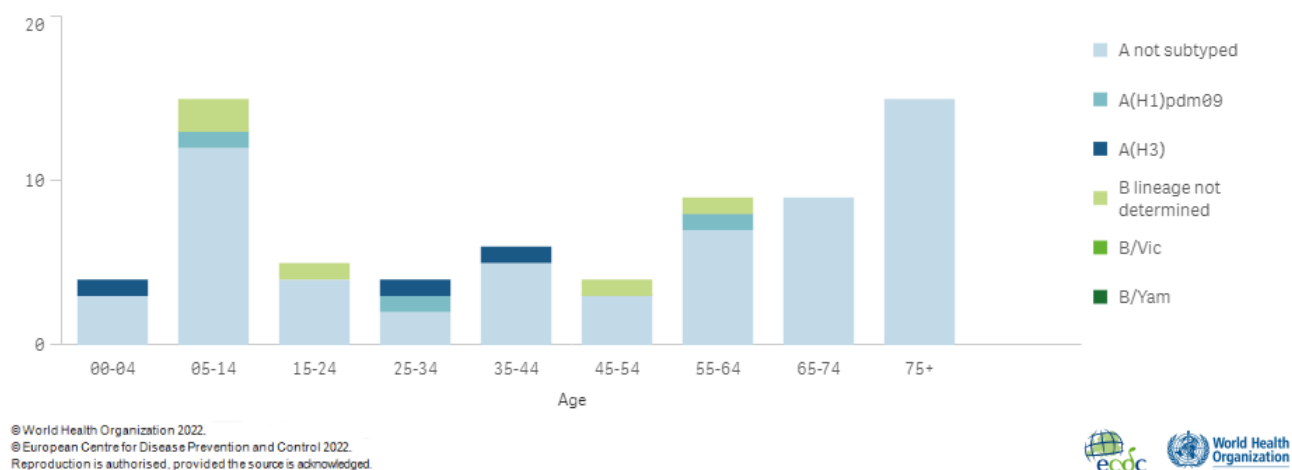


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Figure 8. Distribution of influenza virus types, subtypes/lineages by age group in wards other than intensive care units (non-ICU), WHO European Region, season 2022/2023

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 42/2022, 3 055 SARI cases were reported by 12 countries or areas (Albania, Belarus, Germany, Ireland, Kazakhstan, Lithuania, Malta, Russian Federation, Serbia, Spain, Türkiye and Ukraine). Of 339 specimens tested for influenza viruses, 19% (n=64) were positive. Of these, influenza type B viruses (n=59, 92%) were detected more frequently than influenza type A viruses (n=5). The highest positivity rates for influenza virus detections were reported by Kazakhstan (41%).

For the season, 9 690 SARI cases were reported by 20 countries or areas. For SARI cases testing positive for influenza virus since week 40/2022, type B viruses have been the most common (n=132, 93%). For six of the 10 influenza A cases, virus subtyping was performed, three were infected by A(H1)pdm09 viruses and three were infected by A(H3) viruses. Of those influenza type B viruses that have been ascribed to a lineage (n=92), all were 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

Number of severe acute respiratory infection (SARI) cases (bar) and positivity for influenza and COVID-19 (line) by week of r...

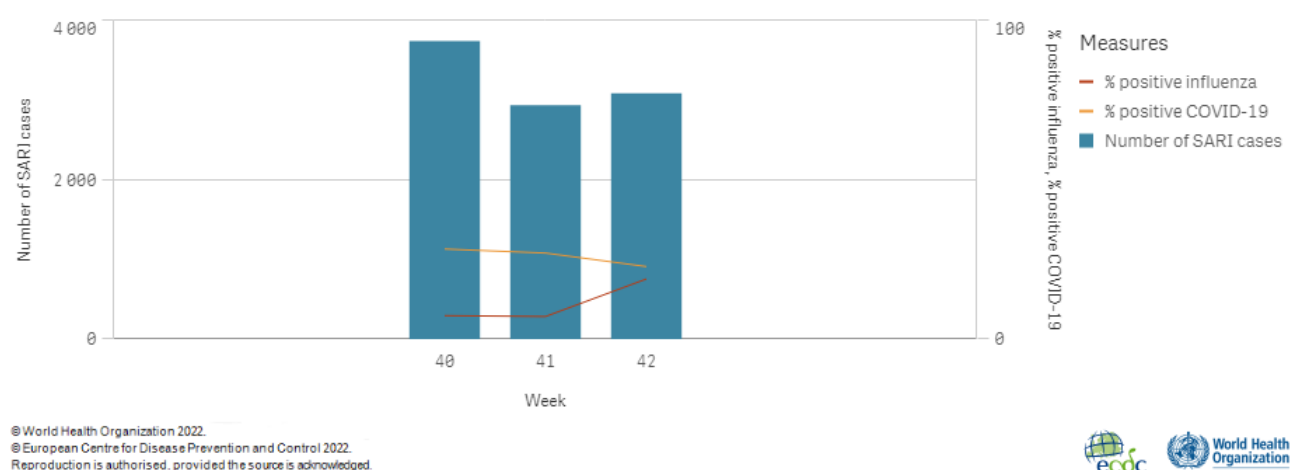
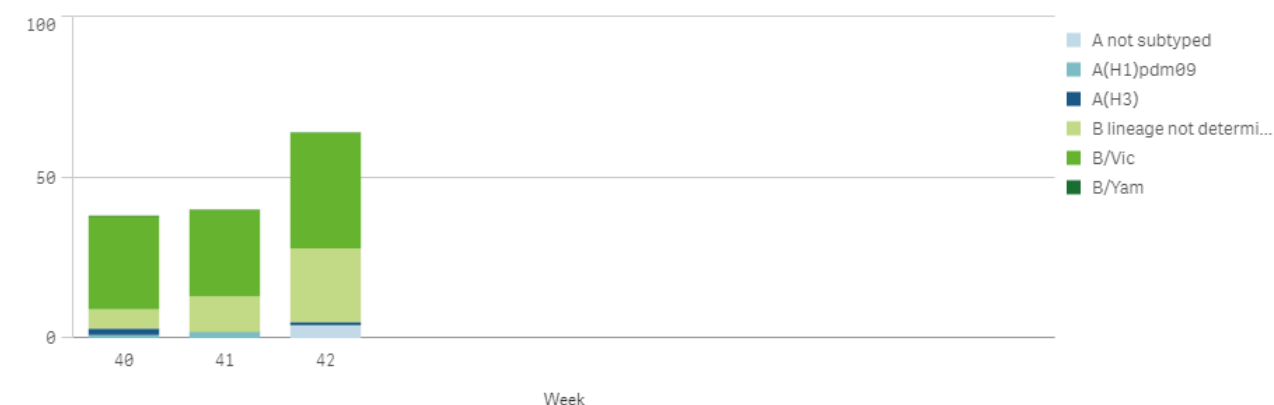


Figure 10. Influenza virus detections by type, subtype/lineage from severe acute respiratory infection (SARI), WHO European Region, season 2022/2023

Influenza detections by virus type, subtype/lineage from severe acute respiratory infection (SARI) surveillance in hospitals - ...



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Virus characteristics

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

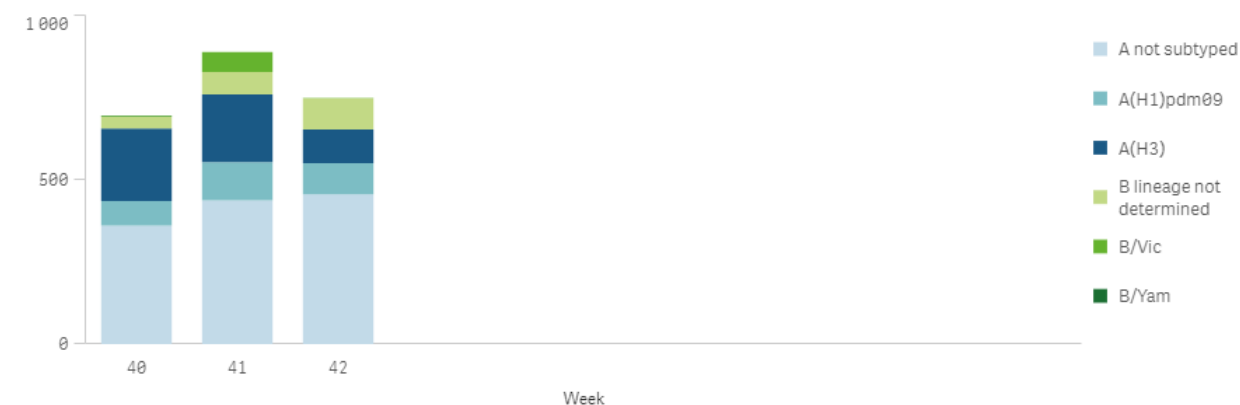
Non-sentinel virologic data

For week 42/2022, 750 of 38 688 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; 654 (87%) were type A and 96 (13%) were type B. Of 198 subtyped A viruses, 103 (52%) were A(H3) and 95 (48%) were A(H1)pdm09. One type B virus ascribed to a lineage was of the B/Victoria lineage (Fig. 11 and Table 2).

For the season to date, more influenza type A (n=2 072, 89%) than type B (n=263, 11%) viruses have been detected. Of 817 subtyped A viruses, 531 (65%) were A(H3) and 286 (35%) were A(H1)pdm09. Of 65 influenza type B viruses ascribed to a lineage, all were B/Victoria (75% 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

Influenza virus detections by type, subtype/lineage and week - WHO Europe, season 2022/2023



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Table 2. Influenza virus detections in non-sentinel-source specimens by type and subtype, week 42/2022 and cumulatively for the season

Sentinel	Current Week (42)		Season 2022-2023	
Virus type and subtype	Number	% ^a	Number	% ^a
Influenza A	654	87.2	2 072	88.7
A(H1)pdm09	95	48	286	35
A(H3)	103	52	531	65
A not subtyped	456	-	1 255	-
Influenza B	96	12.8	263	11.3
B/Victoria lineage	1	100	65	100
B/Yamagata lineage	0	0	0	0
Unknown lineage	95	-	198	-
Total detections (total tested)	750 (38 688)	NA	2 335 (118 406)	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

The only genetically characterized A(H1)pdm09 virus up to week 42/2022, belonged to clade 6B.1A.5a.2, represented by A/Victoria/2570/2019.

Currently, ECDC's **May** virus characterization report is available and describes available data from circulating viruses during 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. Similarly, the WHO's **July** virus characterization report is also available, however, newer and more up-to-date reports will be published soon.

Previously published influenza virus characterization reports are available on [ECDC website](#) and [WHO website](#).

Antiviral susceptibility testing

Up to week 42/2022, three viruses were assessed for susceptibility to neuraminidase inhibitors (2 A(H3) and one A(H1)pdm09 genotypically), and one 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](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](#).

Acknowledgements

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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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