

Summary

Week 40/2022 (03-09 October 2022)

- This is the first weekly analysis of the season 2022-2023
- One country (UK – Scotland) reported regional 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 was 3%, which is below the threshold for epidemic activity of 10%.
- Both influenza type A and B viruses were detected with A(H3) viruses being dominant.
- 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 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 40/2022, of 34 countries and areas reporting on intensity of influenza activity, 25 reported baseline-intensity (across the Region) and nine reported low-intensity (across the Region) (Fig. 1).

Of 33 countries and areas reporting on geographic spread of influenza viruses, 17 reported no activity (across the Region), 14 reported sporadic spread (across the Region), one reported local spread (Malta) and one reported regional spread (UK (Scotland)) (Fig. 2).

Figure 1. Intensity of influenza activity in the European Region, week 40/2022

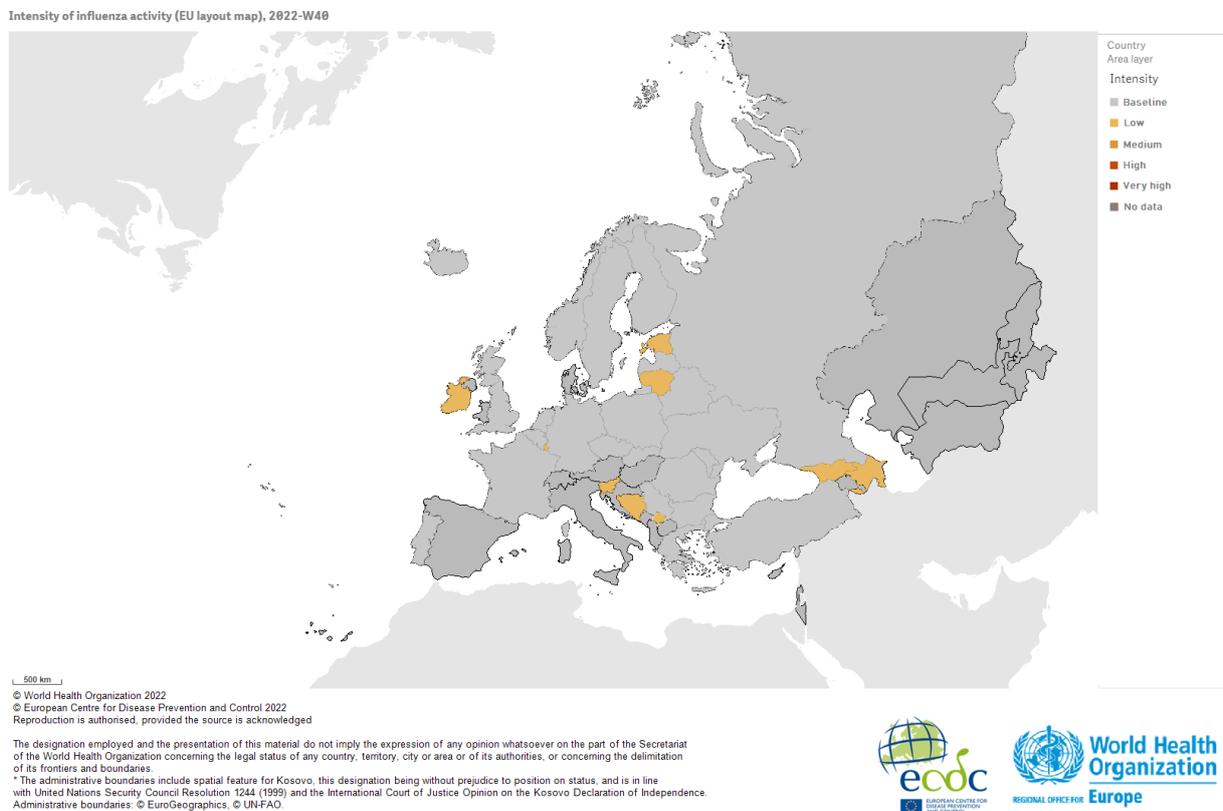
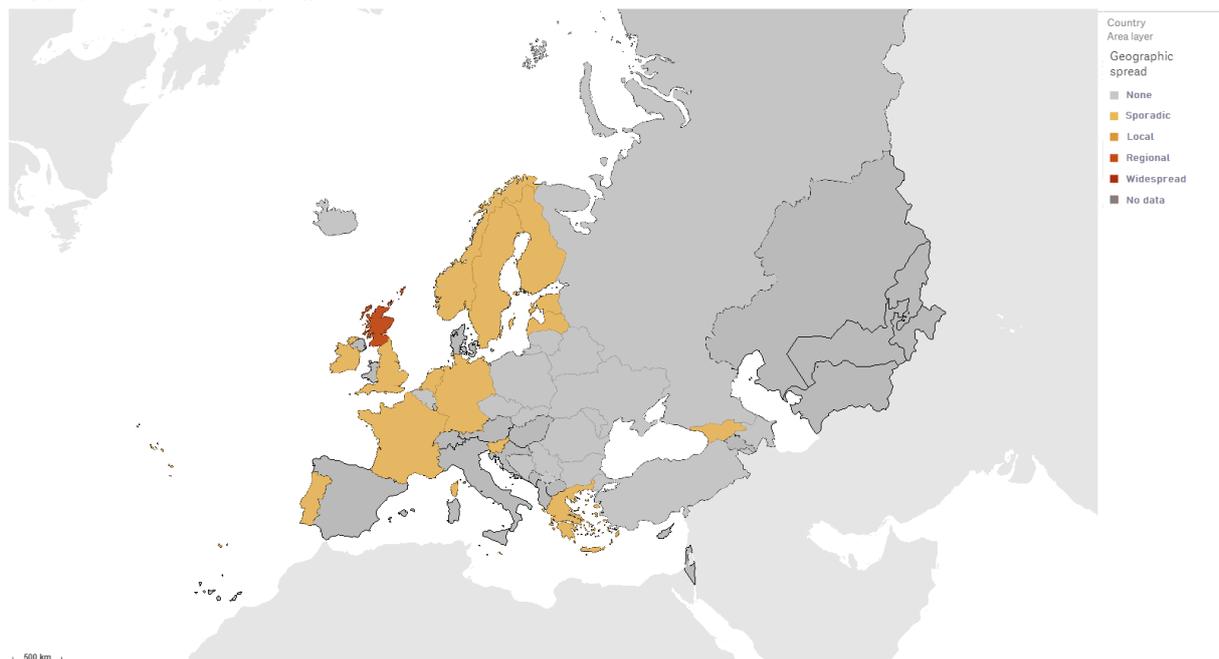


Figure 2. Geographic spread of influenza viruses in the European Region, week 40/2022

Geographic spread of influenza activity (EU layout map), 2022-W40



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

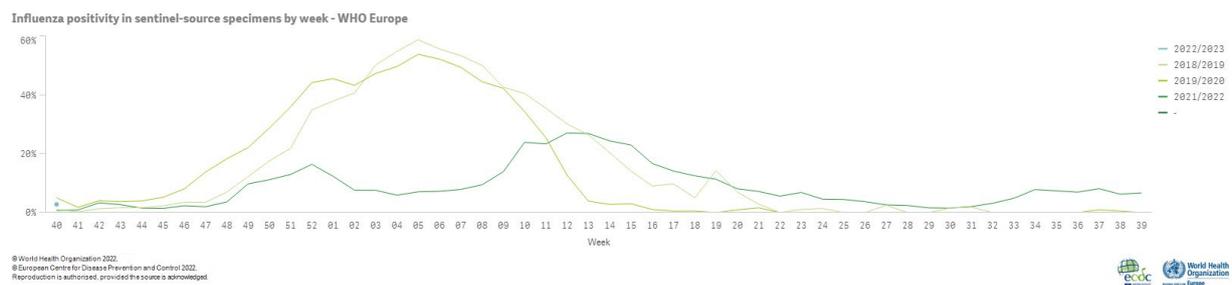
Please note:

- 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 was 3% which is below the set epidemic threshold of 10% positivity (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: The full EuroMOMO report can be found here: <https://www.euromomo.eu/>.

Primary care data

Syndromic surveillance data

None of the countries and areas in which thresholds for ILI or ARI activity have been defined 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)

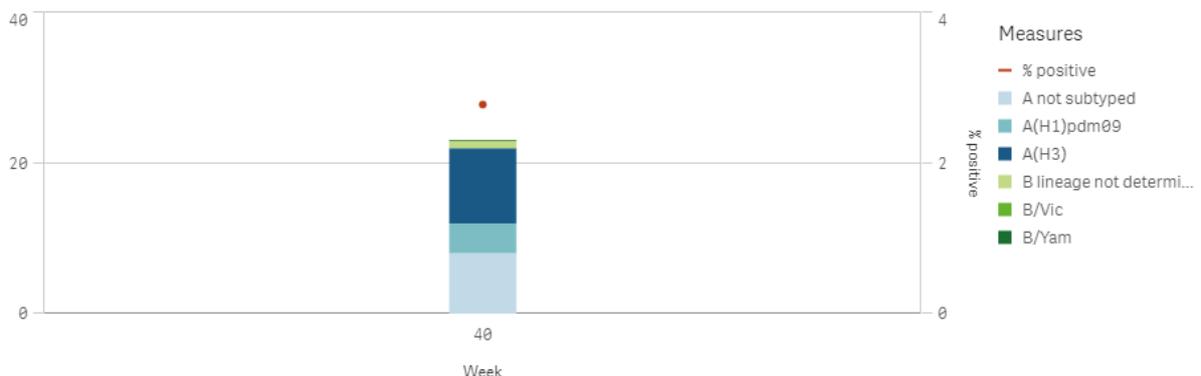
For week 40/2022, 23 (3%) of 828 sentinel specimens tested positive for an influenza virus; 22 (96%) were type A and one (4%) was type B. Of 14 subtyped A viruses, 71% were A(H3) and 29% A(H1)pdm09. The type B virus was not ascribed to a lineage (Fig. 4 and Table 1).

Of 17 countries or areas across the Region that each tested at least 10 sentinel specimens in week 40/2022, Germany reported 12% positivity.

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, European Region, season 2022/2023

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



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Table 1. Influenza virus detections in sentinel source specimens by type and subtype for week 40/2022 and cumulatively for the season

Sentinel Virus type and subtype	Current Week (40)		Season 2022-2023	
	Number	% ^a	Number	% ^a
Influenza A	22	95.7	22	95.7
A(H1)pdm09	4	28.6	4	33.3
A(H3)	10	71.4	8	66.7
A not subtyped	8	-	10	-
Influenza B	1	4.3	1	4.3
B/Victoria lineage	0	-	0	-

B/Yamagata lineage	0	-	0	-
Unknown lineage	1	-	1	-
Total detections (total tested)	23 (828)	2.8	23 (828)	2.8

^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.

Hospital surveillance

A subset of countries and areas monitor 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 infection (SARI).

Laboratory-confirmed hospitalized cases

1.1) Hospitalized laboratory-confirmed influenza cases – ICUs

For week 40/2022, 12 laboratory-confirmed influenza cases were reported from ICU wards in the UK (England). Ten patients were infected with influenza A virus, two of which were subtyped as A(H3) and one as A(H1)pdm09 (Fig. 5). Two patients were infected with influenza type B viruses which were not ascribed to a lineage. No information was available on the age of the patients.

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

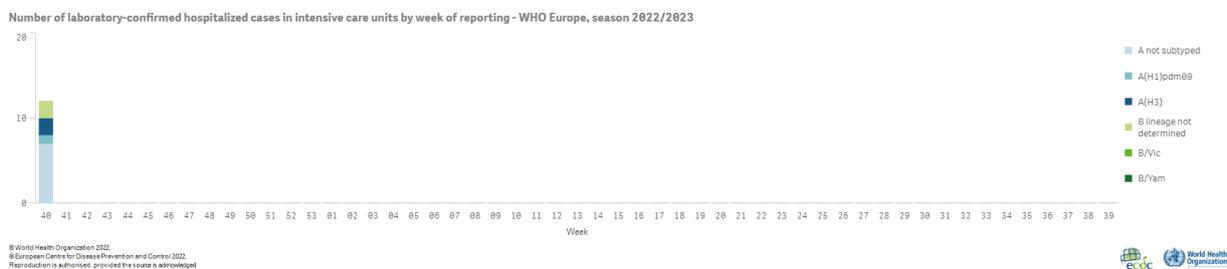
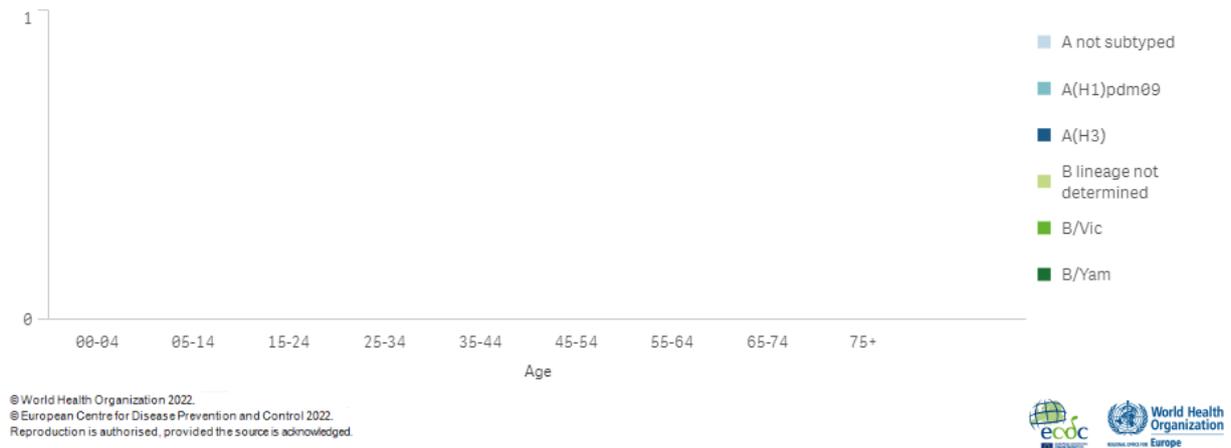


Figure 6. Distribution of influenza virus types, subtypes/lineages by age group in intensive care units (ICU), European Region, season 2022/2023

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



1.2) Hospitalized laboratory-confirmed influenza cases – other wards

For week 40/2022, 18 laboratory-confirmed influenza cases were reported from other wards in Ireland. One of 17 influenza type A viruses was subtyped as A(H1)pmd09 and the one influenza type B virus was not ascribed to a lineage (Fig. 7 and 8).

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

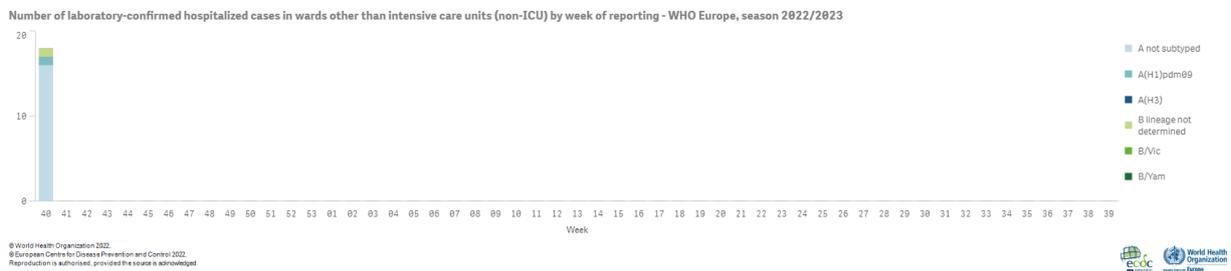
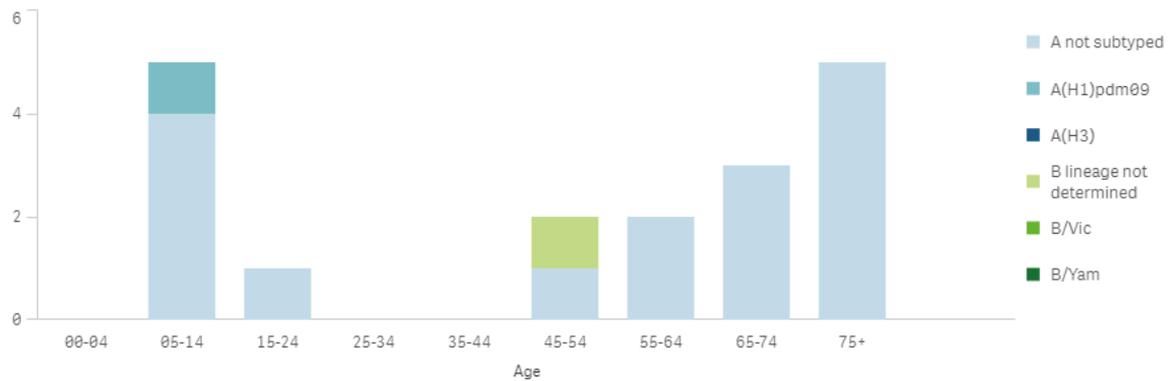


Figure 8. Distribution of influenza virus types, subtypes/lineages by age group in wards other than intensive care units (non-ICU), European Region, season 2022/2023

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



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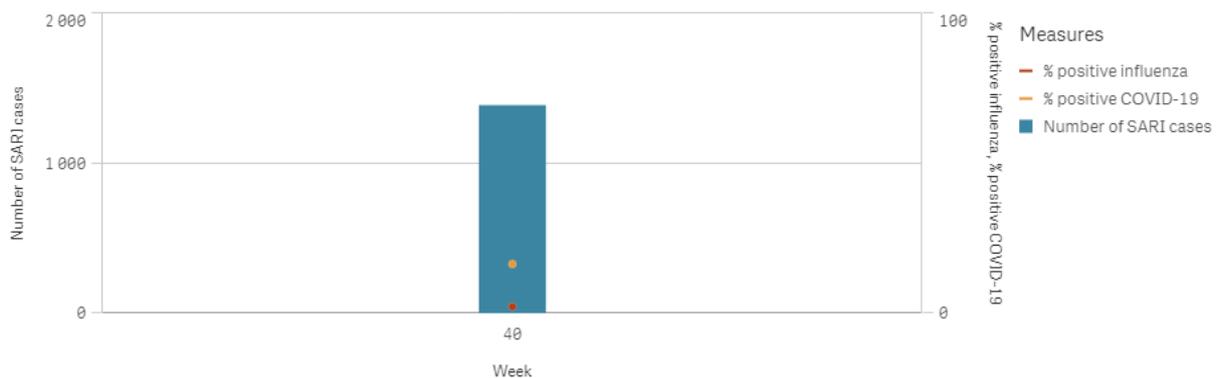


Severe acute respiratory infection (SARI)-based hospital surveillance

For week 40/2022, 1 388 SARI cases were reported by 11 countries or areas (Belarus, Bosnia-Herzegovina, Georgia, Ireland, Lithuania, Malta, Republic of Moldova, Russian Federation, Serbia, Turkey and Ukraine). Of 140 cases tested for influenza viruses, three (2%) were positive for type A viruses, none of which were subtyped (Fig. 9 and 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, 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...

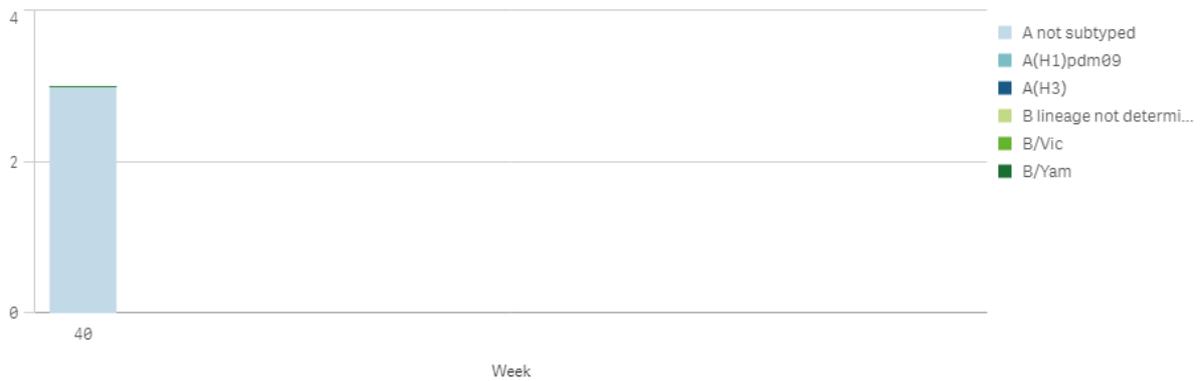


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Figure 10. Influenza virus detections by type, subtype/lineage from severe acute respiratory infection (SARI), European Region, season 2022/2023

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



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Virus characteristics

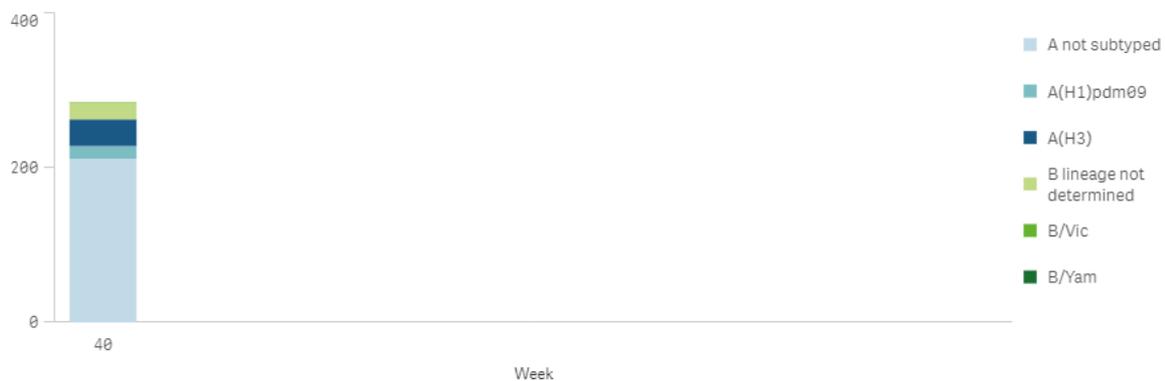
Details of the distribution of viruses detected in sentinel-source specimens can be found in the [Primary care data](#) section.

Non-sentinel virologic data

For week 40/2022, 285 of 28 523 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; 263 (92%) were type A and 22 (8%) were type B. Of 51 subtyped A viruses, 35 (69%) were A(H3) and 16 (31%) were A(H1)pdm09. One of 22 type B viruses was ascribed to the Victoria lineage (Fig. 11 and Table 2).

Figure 11. Influenza virus detections by type, subtype/lineage and week, non-sentinel sources, 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 40/2022 and cumulative for the season

Virus type and subtype	Current Week (40)		Season 2022-2023	
	Number	% ^a	Number	% ^a
Influenza A	263	92.3	263	92.3
A(H1)pdm09	16	31.4	16	31.4
A(H3)	35	68.6	35	68.6
A not subtyped	212	-	212	-
Influenza B	22	7.7	22	7.7
B/Victoria lineage	1	-	1	-
B/Yamagata lineage	0	-	0	-
Unknown lineage	21	-	21	-
Total detections (total tested)	285 (28 523)		285 (28 523)	

^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

No viruses were reported to have been genetically characterized for the season 2022-2023.

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 of seasonal influenza viruses

For the season 2022-2023, no viruses were assessed for susceptibility to neuraminidase inhibitors or to baloxavir marboxil, by genetic or phenotypic methods.

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.

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- 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:

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

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

Disclaimer:

** 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.*

This weekly update was prepared by an editorial team at the European Centre for Disease Prevention and Control (Cornelia Adlhoch, Maja Vukovikj, and Edoardo Colzani) and the WHO Regional Office for Europe (Margaux Meslé, Piers Mook and Richard Pebody).

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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.

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