Summary

Week 45/2021 (8–14 November 2021)

- Influenza activity was low throughout the European Region.
- Of the 1 317 specimens tested for influenza viruses in week 45/2021 from patients presenting with ILI or ARI symptoms to sentinel primary healthcare sites, 13 (1%) were positive for influenza virus; 12 influenza A viruses (3 subtyped as A(H3)) and 1 influenza B virus.
- Hospitalized laboratory confirmed influenza cases were reported from an ICU ward (1 A(H3) virus) and from SARI cases (21 influenza A viruses).
- Influenza viruses were detected sporadically from non-sentinel sources (such as hospitals, schools, primary care facilities not involved in sentinel surveillance, or nursing homes and other institutions). Both influenza type A and type B viruses were detected.

2021-2022 season overview

- For the Region as a whole, influenza activity has been at baseline level with sporadic detections, mostly of A(H3) viruses.
- During the influenza Vaccine Composition Meeting for the southern hemisphere 2022 season, held in September 2021, WHO recommended updating of the A(H3N2) and the B/Victoria-lineage components. The full report can be found here.

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

Influenza elsewhere

- South Africa reported an increase in number of influenza cases and Influenza-Like-Illness in week 44: ALERT: Increase in influenza cases in South Africa - NICD

Qualitative indicators

For week 45/2021, of 36 countries and areas reporting on intensity of influenza activity, 32 reported baseline-intensity and 4 reported low-intensity (Azerbaijan, Kyrgyzstan, Slovakia and Kosovo (in accordance with UN Security Council Resolution 1244 (1999)) (Fig. 1).

Of 36 countries and areas reporting on geographic spread of influenza viruses, 22 reported no activity, 13 reported sporadic spread and 1 reported regional spread (Kyrgyzstan) (Fig. 2).

Figure 1. Intensity of influenza activity in the European Region, week 45/2021

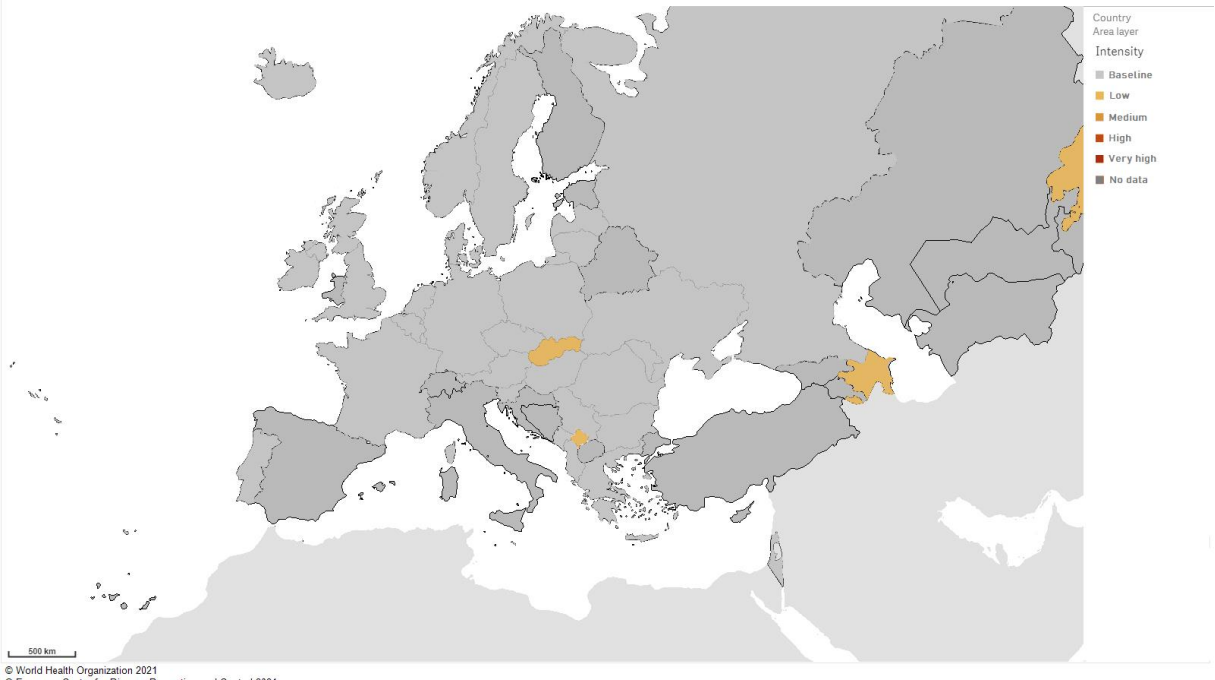
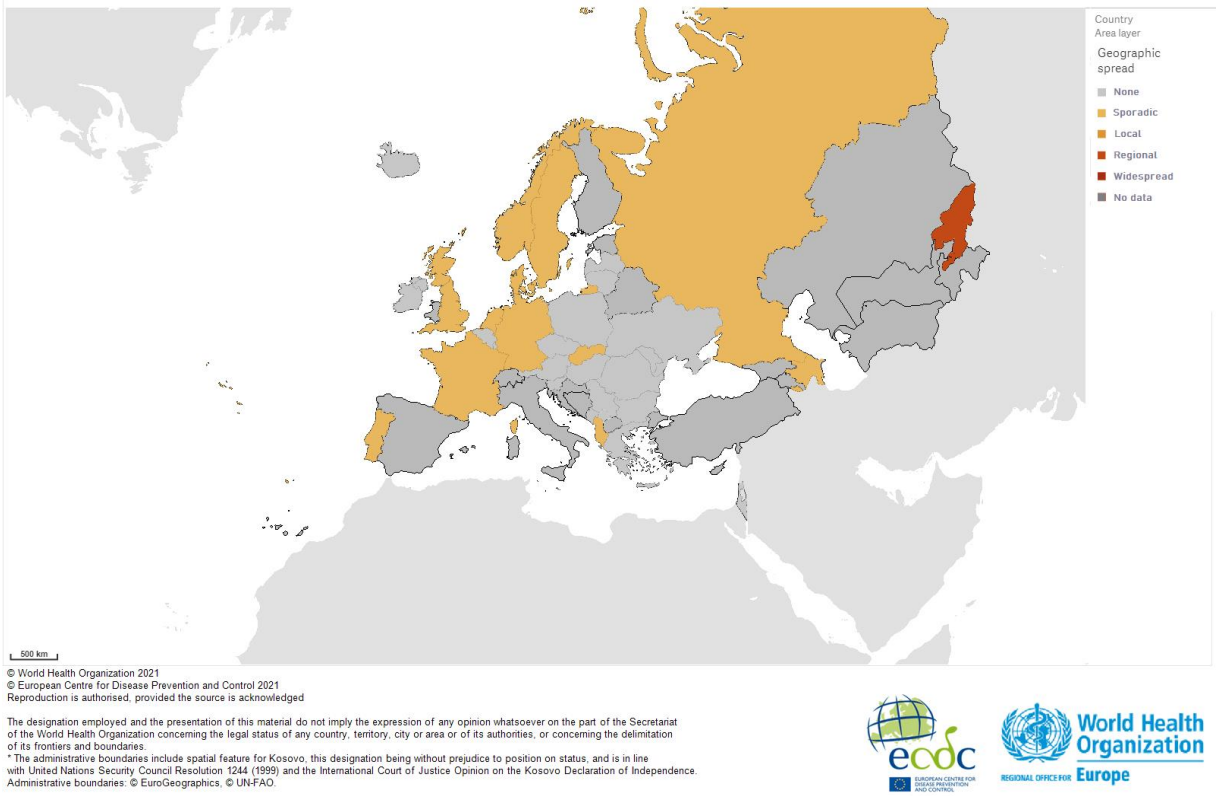


Figure 2. Geographic spread of influenza viruses in the European Region, week 45/2021



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

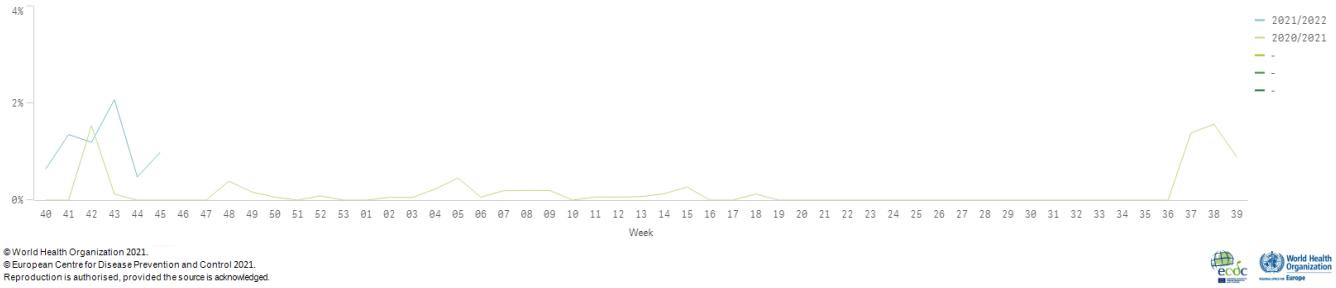
Please note:

- 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 positivity in sentinel-source specimens by week, WHO Europe



External data sources

Mortality monitoring: For week 45/2021 overall pooled EuroMOMO estimates of all-cause mortality for the participating European countries shows no overall significant excess mortality. At country level, Ukraine is experiencing a very high increase in excess mortality temporally associated with COVID-19 circulation. Excess mortality observed elsewhere is also likely due to COVID-19. Data from 25 European countries or subnational regions were included in this week 45/2021 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 (n=3; Azerbaijan, Kyrgyzstan, Ukraine), northern (n=1; Denmark), southern (n=1; Serbia) and western (n=3; Austria, Belgium, Hungary) 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 (n=2; Kyrgyzstan, Russian Federation), northern (n=1; Latvia) and western (n=1; Czechia) areas of the European Region reported activity above baseline levels.

Please note:

1. 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 MEM method and based on historical ILI/ARI data.

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

For week 45/2021, 13 (1%) of 1 317 sentinel specimens tested positive for an influenza virus; 12 (92%) were type A and 1 (8%) was type B. Of 3 subtyped A viruses, all were 3 A(H3) (Fig. 4 and Table 1). Of 20 countries or areas across the Region that each tested at least 10 sentinel specimens in week 45/2021, only 1 reported a rate of influenza virus detections above 10%: Tajikistan (22%).

For the season to date, 76 (1%) of 6 815 sentinel specimens tested positive for an influenza virus. More influenza type A (n=72, 95%) than type B (n=4, 5%) viruses have been detected. Of 53 subtyped A viruses, 52 (98%) were A(H3) and 1 (2%) was A(H1N1)pdm09. No influenza type B viruses were ascribed to a lineage (Fig. 3 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 detections in sentinel-source specimens by type and subtype, and week for weeks 40/2020-45/2021

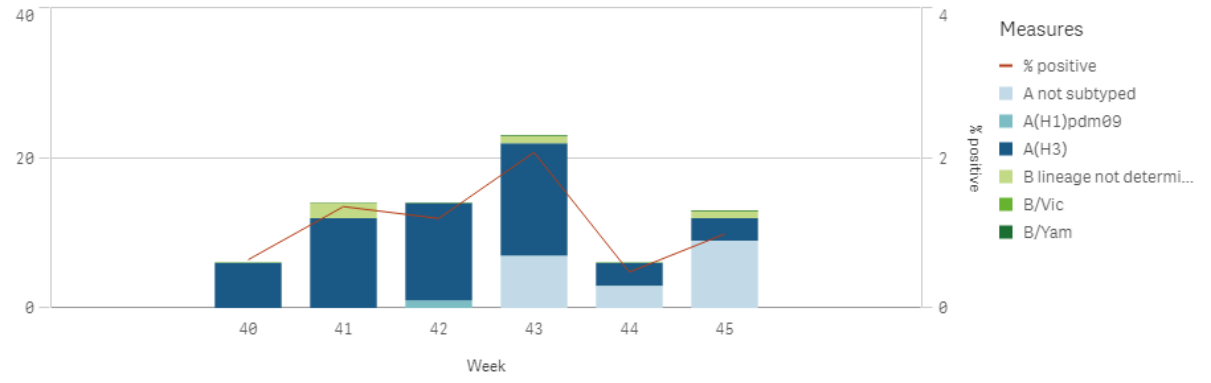


Table 1. Influenza virus detections in sentinel source specimens by type and subtype for week 45/2021 and cumulatively for the season

Sentinel	Current Week (45)		Season 2021-2022	
Virus type and subtype	Number	%[a]	Number	%[a]
Influenza A	**12**	**92.3**	**72**	**94.7**
A(H1)pdm09	0	0	1	1.9
A(H3)	3	100	52	98.1
A not subtyped	9	-	19	-
Influenza B	**1**	**7.7**	**4**	**5.3**
B/Victoria lineage	0	0	0	0
B/Yamagata lineage	0	0	0	0
Unknown lineage	1	-	4	-
Total detections (total tested)	**13 (1 317)**	**1**	**76 (6 815)**	**1.1**

[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 week 45/2021.

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; mainly in the eastern part of the Region).

Laboratory-confirmed hospitalized cases

1.1) Hospitalized laboratory-confirmed influenza cases – ICUs

For week 45/2021, 1 laboratory-confirmed influenza case was reported from an ICU ward (in Sweden). The patient was infected with influenza A(H3) virus (Fig. 5 and 6).

Since week 40/2021, there have been 8 influenza type A viruses and 1 influenza type B virus detected. Of 3 subtyped influenza A viruses, 2 were A(H1N1)pdm09 and 1 A(H3). No influenza B viruses were ascribed to a lineage. Of 3 cases with known age, 2 were 0-4 years old and 1 was 5-14 years old.

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

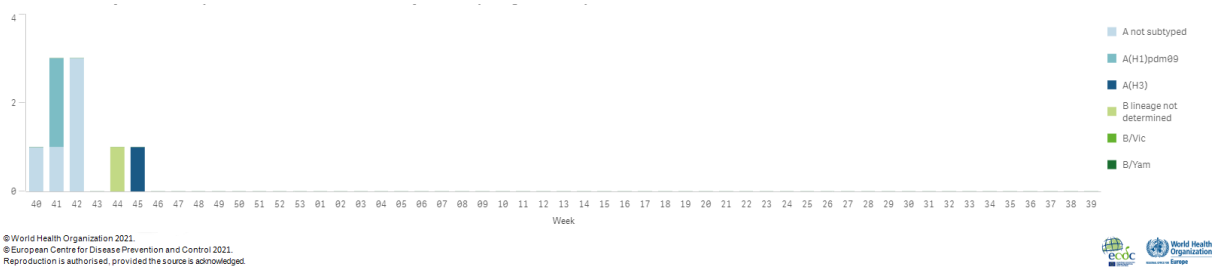


Figure 6. Distribution of virus types, subtypes/lineages by age group in intensive care units (ICU), WHO Europe, season 2021/2022

1.2) Hospitalized laboratory-confirmed influenza cases – other wards

There were no reports of hospitalized laboratory-confirmed influenza cases in other wards during week 45/2021 (Fig. 7 and 8).

Since week 40/2021, there has been 1 influenza type A virus and no influenza type B viruses detected. The influenza A virus was not ascribed to a subtype. The 1 case with known age was 0-4 years old.

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

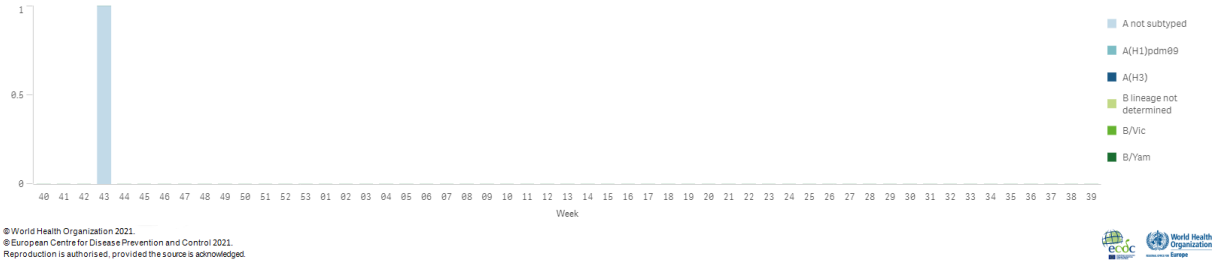


Figure 8. Distribution of virus types, subtypes/lineages by age group in wards other than intensive care units (non-ICU), WHO Europe, season 2021/2022

Severe acute respiratory infection (SARI)-based hospital surveillance

For week 45/2021, 4 358 SARI cases were reported by 12 countries or areas (Albania, Azerbaijan, Bosnia and Herzegovina, Kyrgyzstan, Lithuania, Malta, Montenegro, Republic of Moldova, Russian Federation, Serbia, Spain and Ukraine). Of 223 specimens tested for influenza viruses, 9% (n=21) were positive. All were influenza A virus (Fig. 9).

For week 45/2021, 10 countries or areas reported a total of 627 tests for and 276 detections of SARS-CoV-2 virus (44% detections overall, varying from 0% in Kyrgyzstan and Uzbekistan, to 93% in Montenegro) from SARI cases.

For the season, 25 456 SARI cases were reported by 21 countries or areas (Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Germany, Kazakhstan, Kyrgyzstan, Lithuania, Malta, Montenegro, Republic of Moldova, Russian Federation, Serbia, Spain, Tajikistan, Turkey, Ukraine,

Uzbekistan and Kosovo (in accordance with Security Council resolution 1244 (1999)). For SARI cases testing positive for influenza virus since week 40/2021, type A viruses have been the most common (n=91, 99%). Of 90 subtyped influenza type A viruses, all were A(H3). The influenza type B virus was not ascribed to a lineage (Fig. 10).

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

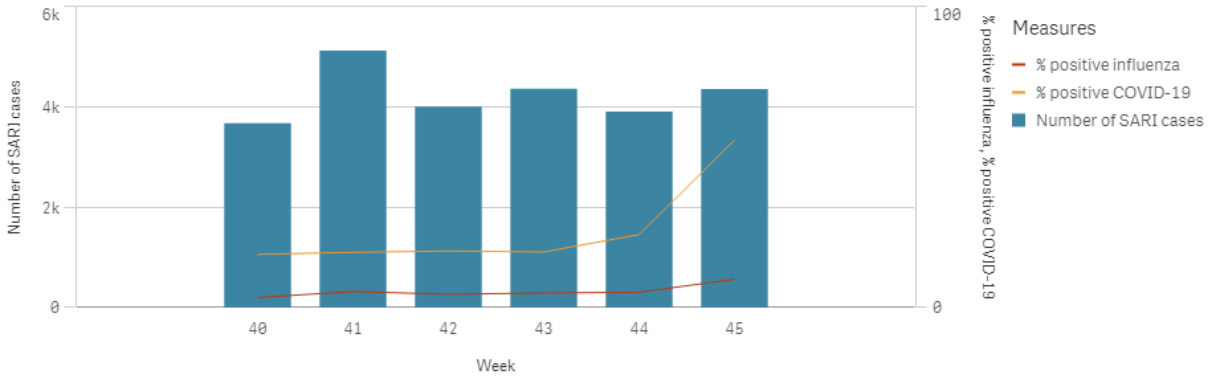
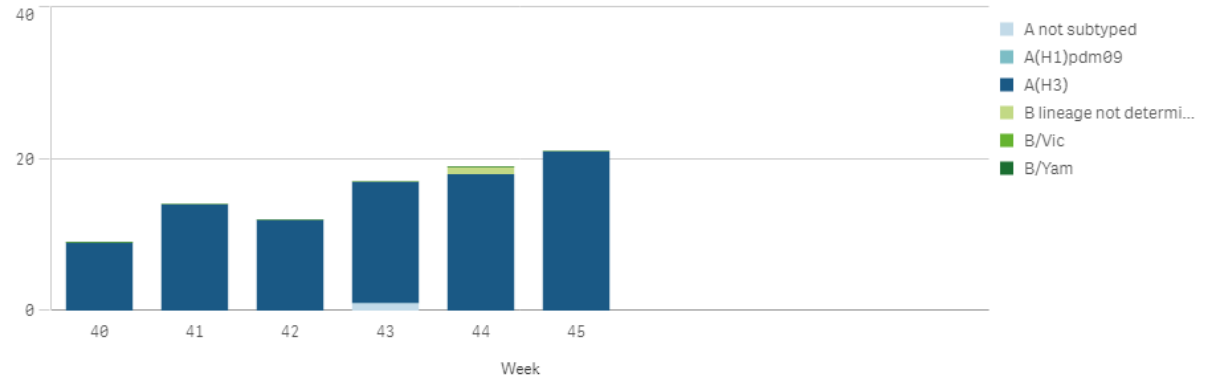


Figure 10. Influenza detections by virus type, subtype/lineage from severe acute respiratory infection (SARI), WHO Europe, season 2021/2022



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

For week 45/2021, 240 of 57 531 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; 85% (n=203) were type A and 15% (n=37) were type B. Of 107 subtyped A viruses, 97% (n=104) were A(H3) and 3% (n=3) were A(H1N1)pdm09. No B viruses were ascribed to a lineage (Fig. 11 and Table 2).

For the season to date, more influenza type A (n=1 066, 86%) than type B (n=180, 14%) viruses have been detected. Of 737 subtyped A viruses, 697 (95%) were A(H3) and 40 (5%) were A(H1N1)pdm09. The one B virus ascribed to a lineage was B/Victoria (99% of type B viruses were reported without a lineage) (Fig. 11 and Table 2).

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

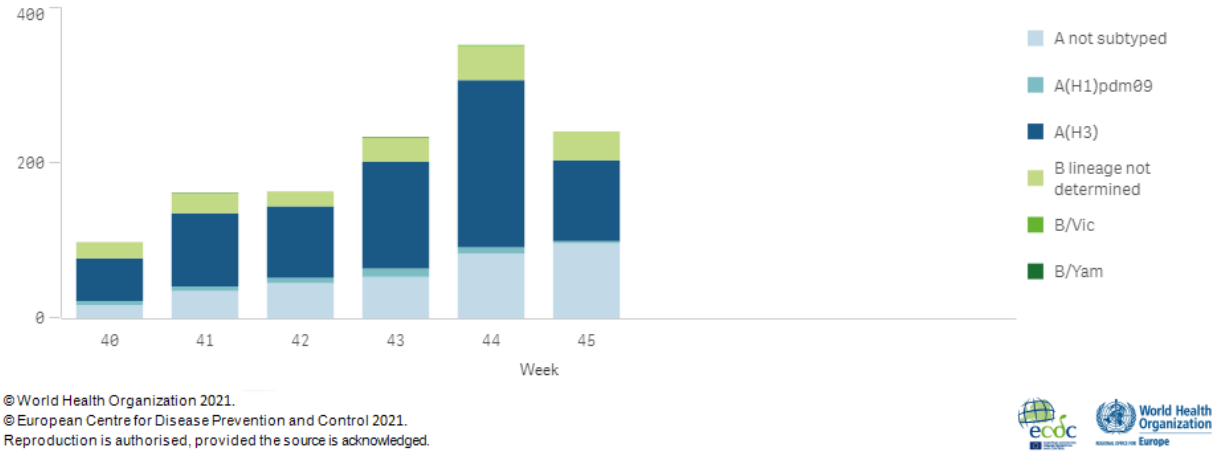


Table 2. Influenza virus detections in non-sentinel source specimens by type and subtype, week 45/2021 and cumulative for the season

	Current Week (45)		Season 2021-2022	
Virus type and subtype	**Number**	**%[a]**	**Number**	**%[a]**
Influenza A	**203**	**84.6**	**1 066**	**85.6**
A(H1)pdm09	3	3	40	5
A(H3)	104	97	697	95
A not subtyped	96	-	329	-
Influenza B	**37**	**15.4**	**180**	**14.4**
B/Victoria lineage	0	0	1	0
B/Yamagata lineage	0	0	0	0
Unknown lineage	37	-	179	-

Total detections (total tested)	**240 (57 531)**	**-**	**1 246 (294 761)**	**-**

[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 characterisation

Up to week 45/2021, 45 A(H3) viruses had been characterised genetically, all of which belonged to clade 3C.2a1b.2a.2. One A(H1) virus collected in week 42 was characterised genetically without clade assignment.

ECDC published the October virus characterisation report that describes the available data from circulating viruses collected after 31 August 2020. This and previously published influenza virus characterization reports are available on the ECDC website.

Antiviral susceptibility of seasonal influenza viruses

Up to week 45/2021, 38 A(H3) viruses were assessed for susceptibility to neuraminidase inhibitors and no amino acid substitutions previously 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 24 September 2021, WHO published recommendations for the components of influenza vaccines for use in the 2022 southern hemisphere influenza season:

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- 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.

It is recommended that **trivalent influenza vaccines** for use in the 2022 southern hemisphere influenza season 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- 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

The full report is published here.

On 26 February 2021, WHO published recommendations for the components of influenza vaccines for use in the 2021-2022 northern hemisphere influenza season:

Egg-based Vaccines

- an A/Victoria/2570/2019 (H1N1)pdm09-like virus;
- an A/Cambodia/e0826360/2020 (H3N2)-like virus;
- a B/Washington/02/2019 (B/Victoria lineage)-like virus; and
- a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus.

Cell- or recombinant-based Vaccines

- an A/Wisconsin/588/2019 (H1N1)pdm09-like virus;
- an A/Cambodia/e0826360/2020 (H3N2)-like virus;
- a B/Washington/02/2019 (B/Victoria lineage)-like virus; and
- a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus.

It was recommended that the influenza B virus component of **both trivalent vaccine types** for use in the 2021–2022 northern hemisphere influenza season should be a B/Washington/02/2019-like virus of the B/Victoria-lineage.

This weekly update was prepared by an editorial team at the European Centre for Disease Prevention and Control (Cornelia Adlhoch, Carlos Carvalho, Nishi Dave, and Pasi Penttinen) 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.

The WHO Regional Office for Europe is responsible for the accuracy of the Russian translation.

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