Summary

Week 47/2021 (22–28 November 2021)

- Influenza activity was increasing throughout the European Region.
- Of the 1471 specimens tested for influenza viruses for week 47/2021, from patients presenting with ILI or ARI symptoms to sentinel primary healthcare sites, 26 (2%) were positive for influenza virus; 24 for type A (the 14 subtyped were A(H3)) and 2 for type B (neither ascribed to a lineage). Influenza activity with influenza-confirmed patients in primary care or hospital settings with a rate of influenza virus detections above 10% has been reported by Kosovo*
- Hospitalized laboratory confirmed influenza cases were reported from ICU wards (1 influenza A virus), and from SARI cases (26 influenza A virus detections).
- 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.
- Influenza activity with influenza-confirmed patients in sentinel primary care settings remains below the threshold of 10% positivity.
- 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

- The United States has reported an increase in A(H3N2) circulation over the last weeks with outbreaks observed in colleges and universities HAN Archive - 00458 | Health Alert Network (HAN) (cdc.gov)

Qualitative indicators

For week 47/2021, of 35 countries and areas reporting on intensity of influenza activity, 28 reported baseline-intensity and 7 reported low-intensity (Azerbaijan, Bosnia and Herzegovina, Estonia, Kyrgyzstan, Russian Federation, Slovakia and Kosovo*)) (Fig. 1).

Of 35 countries and areas reporting on geographic spread of influenza viruses, 17 reported no activity, 13 reported sporadic spread, 1 reported local spread (Slovakia) and 4 reported regional spread (Kyrgyzstan, Russian Federation, Sweden, Kosovo*) (Fig. 2).

Figure 1. Intensity of influenza activity in the European Region, week 47/2021

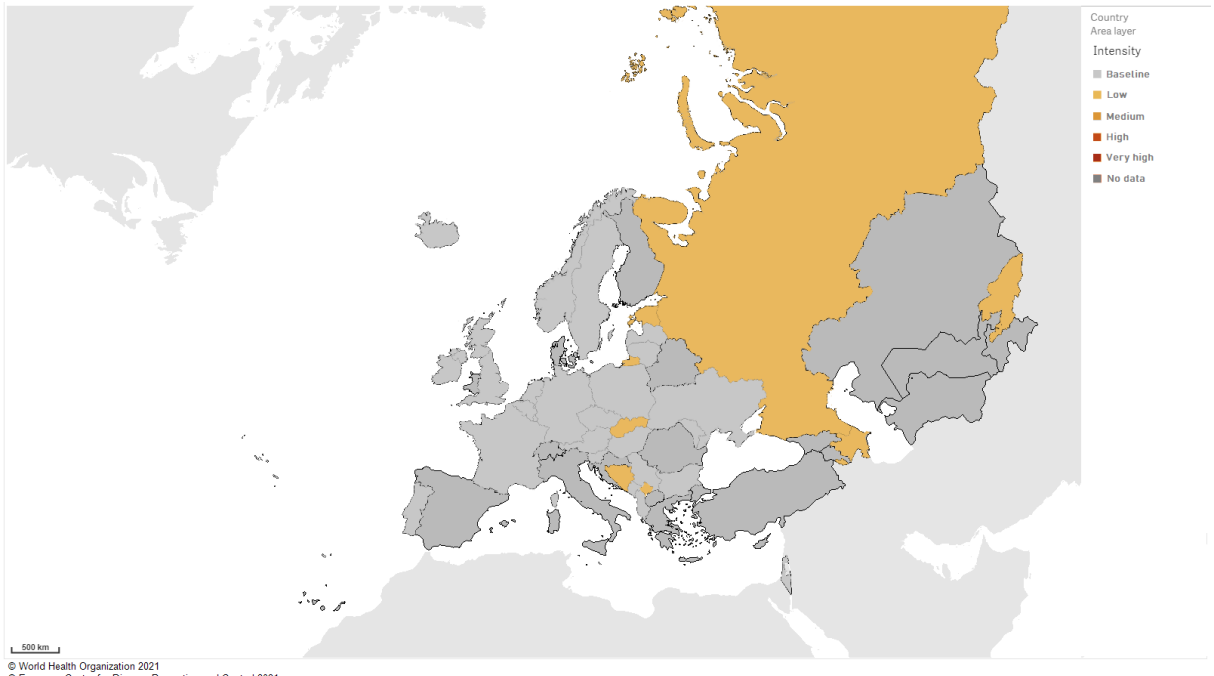
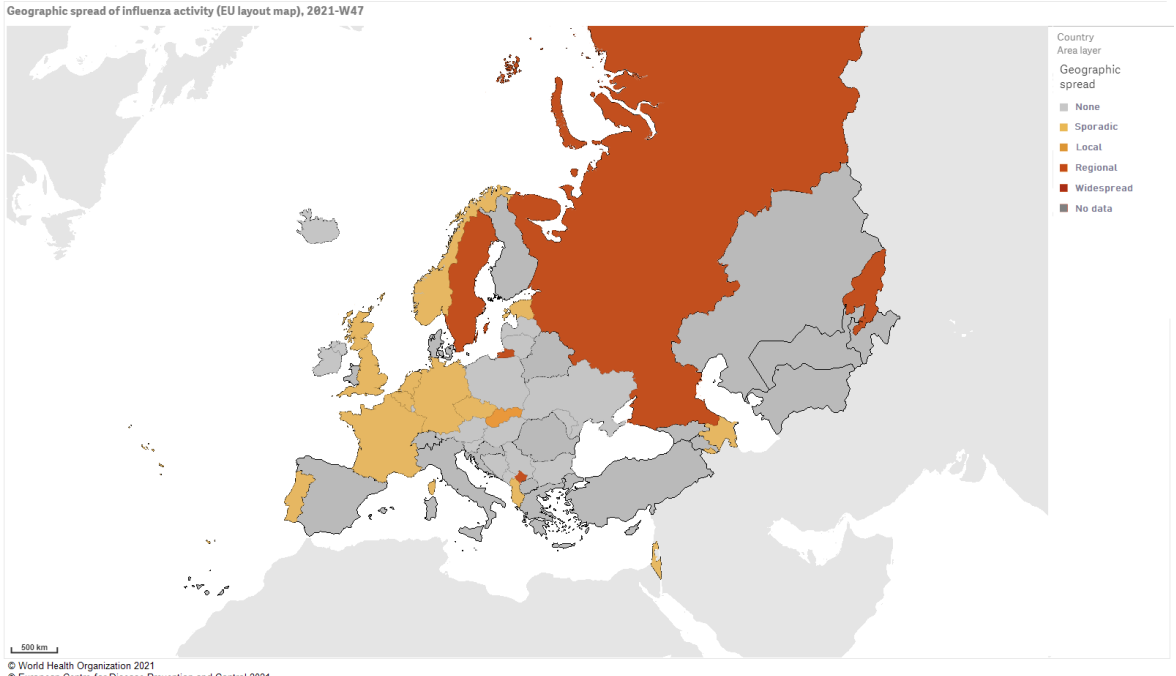


Figure 2. Geographic spread of influenza viruses in the European Region, week 47/2021



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

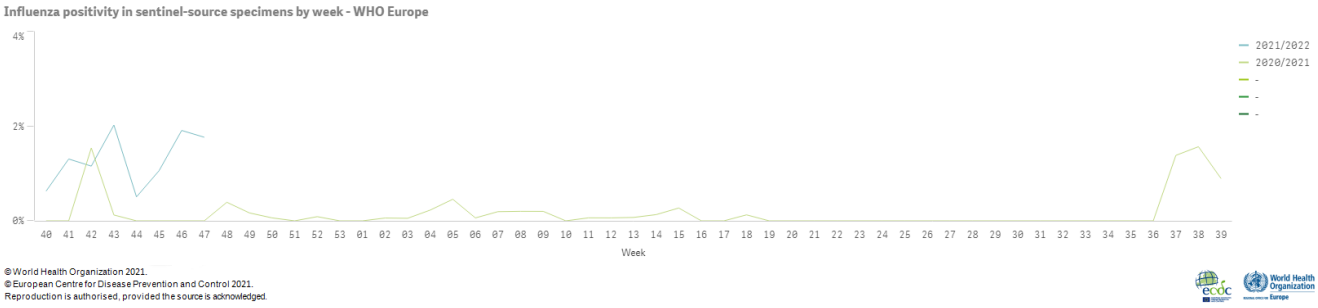
Please note:

- 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 European Region, seasons 2020/2021 and 2021/2022



External data sources

Mortality monitoring: Week 47/2021 overall pooled EuroMOMO estimates of all-cause mortality for the participating European countries show an elevated level of excess mortality. In countries experiencing high COVID-19 incidence over recent weeks, several are experiencing low or moderate excess all-cause mortality. Ukraine and now the Netherlands in particular are experiencing high levels of excess mortality temporally associated with COVID-19 circulation. Data from 25 European countries or subnational regions were included in this week 47/2021 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, Russian Federation), northern (n=2; Estonia, Ireland), southern (n=1; Serbia) and western (n=5; Austria, Belgium, Hungary, Luxembourg, Switzerland) 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=2; Estonia, 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 47/2021, 26 (2%) of 1 471 sentinel specimens tested positive for an influenza virus; 24 (92%) were type A and 2 (8%) were type B. Of 14 subtyped A viruses, 100% were A(H3) (Fig. 4 and Table 1). Of 22 countries or areas across the Region that each tested at least 10 sentinel specimens for week 47/2021, only 1 reported a rate of influenza virus detections above 10%: Kosovo* (in accordance with UN Security Council Resolution 1244 (1999)) (43%).

For the season to date, 139 (1%) of 10 461 sentinel specimens tested positive for an influenza virus. More influenza type A (n=133, 96%) than type B (n=6, 4%) viruses have been detected. Of 99 subtyped A viruses, 98 (99%) were A(H3) and 1 (1%) was A(H1)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.

Table 1. Influenza virus detections in sentinel source specimens by type and subtype for week 47/2021 and cumulatively for the season

Sentinel	Current Week (47)		Season 2021-2022	
Virus type and subtype	Number	%[a]	Number	%[a]
Influenza A	**24**	**92.3**	**133**	**95.7**
A(H1)pdm09	0	0	1	1.1
A(H3)	14	100	98	98.9
A not subtyped	10	-	34	-
Influenza B	**2**	**7.7**	**6**	**4.3**
B/Victoria lineage	0	0	0	0
B/Yamagata lineage	0	0	0	0
Unknown lineage	2	-	6	-
Total detections (total tested)	**26 (1 471)**	**1.8**	**139 (10 461)**	**1.3**

[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 47/2021.

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 47/2021, 1 laboratory-confirmed influenza case was reported from an ICU ward (in Sweden). The patient was infected with an influenza type A virus, but subtype was not determined (Fig. 4 and 5).

Since week 40/2021, more influenza type A (n=14, 93%) than type B (n=1, 7%) viruses were detected. Of 4 subtyped influenza A viruses, 2 were A(H1)pdm09 and 2 A(H3). No influenza B viruses were ascribed to a lineage. Of 10 cases with known age, 4 were 65 years and older, 2 were 0-4 years old, 1 was 5-14 years old and 1 was 15-64 years old.

Figure 4. Number of laboratory-confirmed hospitalized cases in intensive care units (ICU) by week of reporting, WHO European Region, season 2021/2022

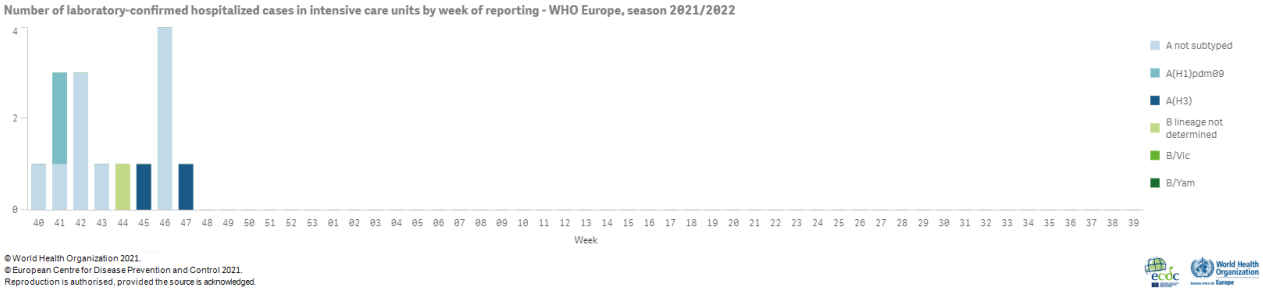
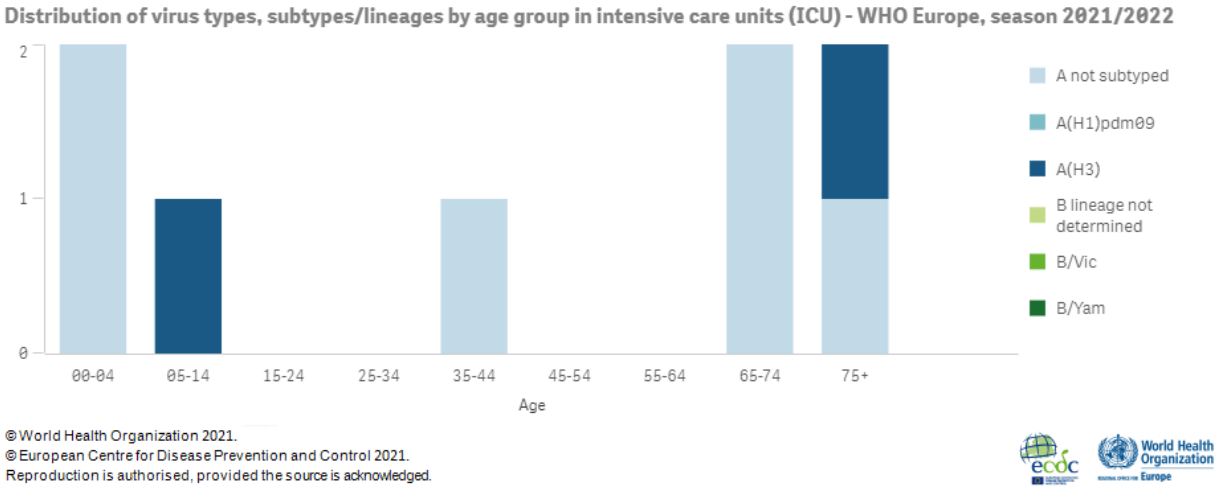


Figure 5. Distribution of virus types, subtypes/lineages by age group in intensive care units (ICU), WHO European Region, season 2021/2022



1.2) Hospitalized laboratory-confirmed influenza cases – other wards

For week 47/2021, there were no reports of hospitalized laboratory-confirmed influenza cases in other wards (Fig. 6 and 7).

Since week 40/2021, there has been 1 influenza type A virus detected which was not ascribed to a subtype. The patient was in the 0-4 years old range.

Figure 6. Number of laboratory-confirmed hospitalized cases in wards other than intensive care units (non-ICU) by week of reporting, WHO European Region, season 2021/2022

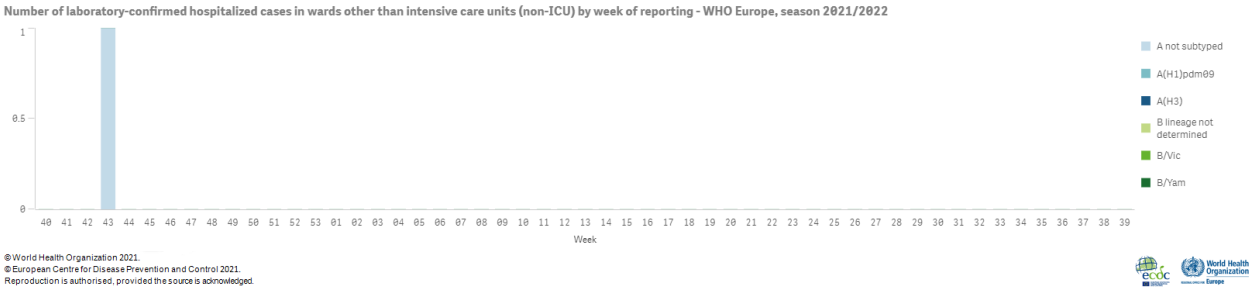
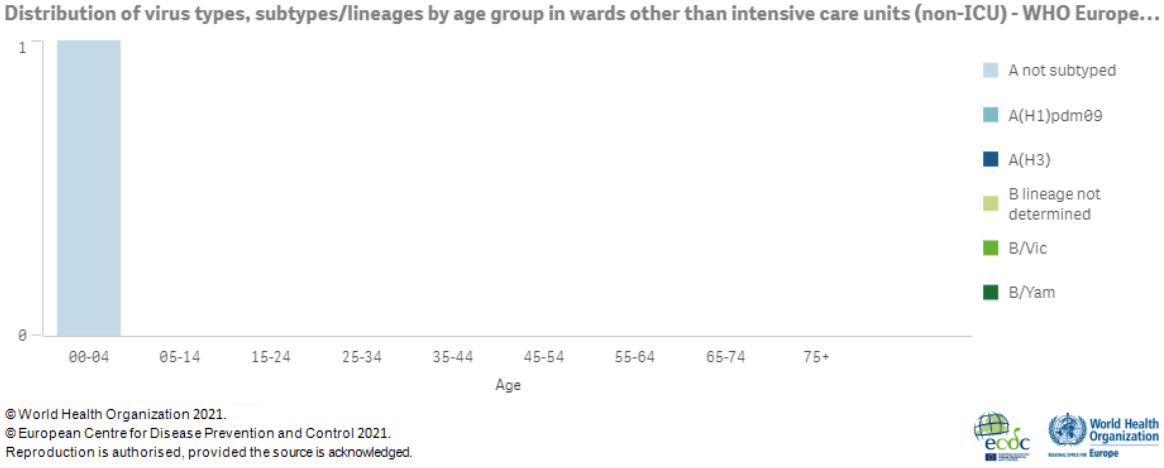


Figure 7. Distribution of virus types, subtypes/lineages by age group in wards other than intensive care units (non-ICU), WHO European Region, season 2021/2022



Severe acute respiratory infection (SARI)-based hospital surveillance

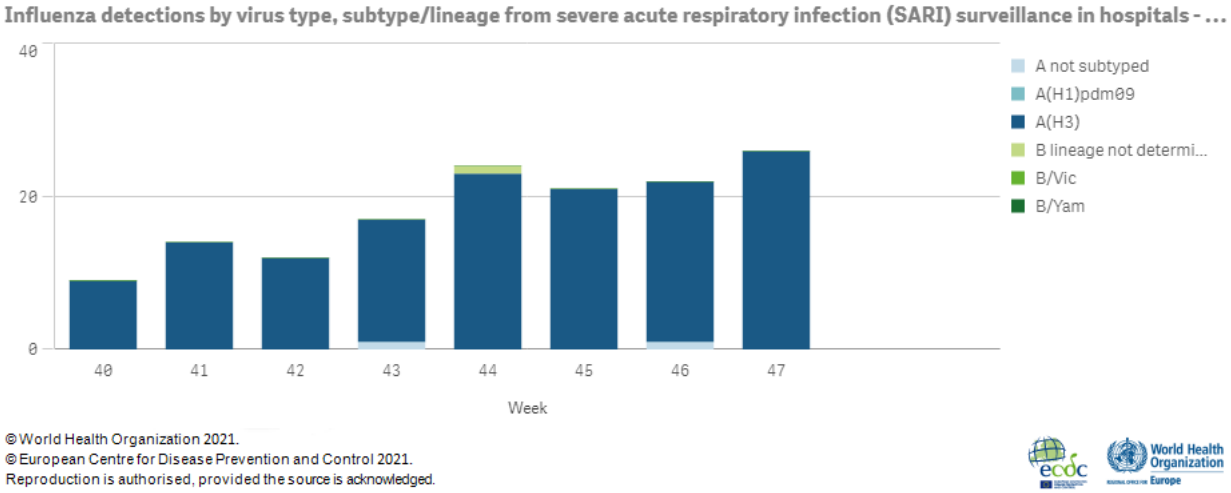
For week 47/2021, 3 239 SARI cases were reported by 10 countries or areas (Albania, Germany, Kyrgyzstan, Malta, Montenegro, Republic of Moldova, Russian Federation, Serbia, Spain and Ukraine). Of 316 specimens tested for influenza viruses, 26 (8%) were positive for influenza type A viruses.

For week 47/2021, 7 countries or areas reported a total of 1 491 tests and 738 detections of SARS-CoV-2 virus (49.5% detections overall, varying from 18.2% in Malta to 95% in Montenegro) from SARI cases.

For the season, 35 312 SARI cases were reported by 18 countries or areas (Albania, Armenia, Belarus, Georgia, Germany, Kazakhstan, Kyrgyzstan, Malta, Montenegro, North Macedonia, Republic of Moldova, Russian Federation, Serbia, Spain, Turkey, Ukraine, Uzbekistan and Kosovo (in accordance with

Security Council resolution 1244 (1999)). Of 145 SARI cases testing positive for influenza virus since week 40/2021, 144 (99%) were infected with type A viruses and all 142 subtyped were A(H3) viruses. The influenza type B virus was not ascribed to a lineage (Fig. 8).

Figure 8. Influenza detections by virus type, subtype/lineage from severe acute respiratory infection (SARI), WHO European Region, 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 47/2021, 925 of 66 557 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; 907 (98%) were type A and 18 (2%) were type B. Of 562 subtyped A viruses, 13 (2%) were A(H1)pdm09 and 549 (98%) A(H3). No type B viruses were ascribed to a lineage (Fig. 11 and Table 2).

For the season to date, more influenza type A (n=2 371, 92%) than type B (n=197, 8%) viruses have been detected. Of 1 564 subtyped A viruses, 63 (4%) were A(H1)pdm09 and 1 501 (96%) were A(H3). Of 2 influenza type B viruses ascribed to a lineage both were B/Victoria (99% of type B viruses were reported without a lineage) (Fig. 11 and Table 2).

Figure 9. Influenza detections by type, subtype/lineage and week, WHO European Region, season 2021/2022

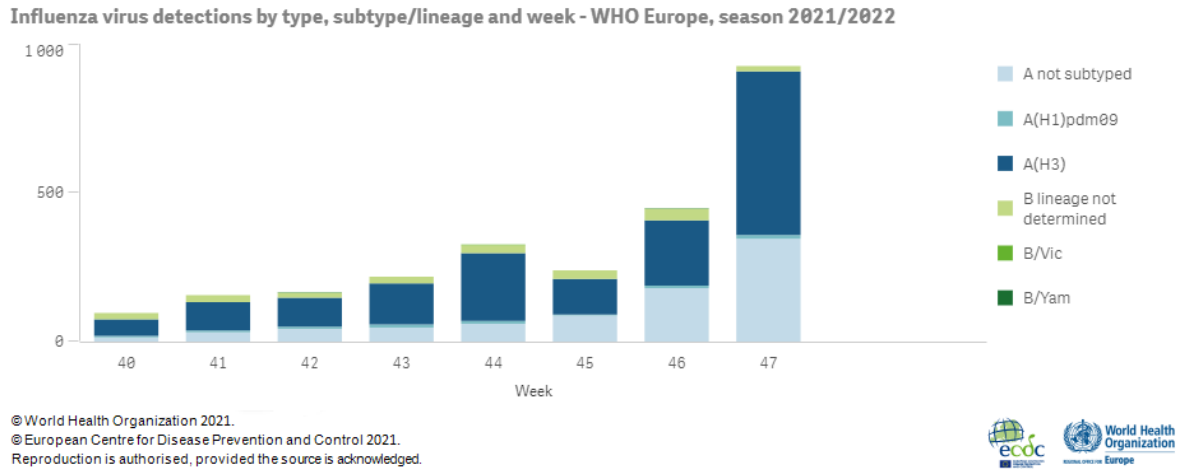


Table 2. Influenza virus detections in non-sentinel source specimens by type and subtype, week 47/2021 and cumulative for the season

	Current Week (47)		Season 2021-2022	
Virus type and subtype	**Number**	**%[a]**	**Number**	**%[a]**
Influenza A	**907**	**98.1**	**2 371**	**92.3**
A(H1)pdm09	13	2.3	63	4.1
A(H3)	549	97.7	1501	95.9
A not subtyped	345	-	807	-
Influenza B	**18**	**1.9**	**197**	**7.7**
B/Victoria lineage	0	0	2	0
B/Yamagata lineage	0	0	0	0
Unknown lineage	18	-	195	-
Total detections (total tested)	**925 (66 557)**	**-**	**2 568 (428 255)**	**-**

[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

Up to week 47/2021, 161 A(H3) viruses have been characterized genetically, all of which belonged to clade 3C.2a1b.2a2. One A(H1)pdm09 virus characterized genetically for week 42 was not attributed to any clade and one A(H1)pdm09 virus for week 45 belonged to clade 6B.1A.5a.1. Up to week 47/2021, 2 B/Victoria viruses have been characterized genetically, one belonged to clade V1A.3a.2 and one to clade V1A.3.

ECDC published the October virus characterization 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 47/2021, 122 A(H3) viruses were assessed for susceptibility to neuraminidase inhibitors and 69 A(H3) viruses were assessed for susceptibility to baloxavir marboxil. No amino acid substitutions previously associated with reduced susceptibility were identified

Vaccine

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 preserved 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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