Weekly influenza overview

Week 13/2021 (29 March–4 April 2021)

- Influenza activity remained at interseasonal levels.
- Of the 1 019 specimens tested for influenza viruses in week 13/2021, from patients presenting with ILI or ARI symptoms to sentinel primary healthcare sites, one was positive for an influenza type B virus.
- 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). Only influenza type B viruses were detected.
- There were no hospitalized laboratory-confirmed influenza cases reported in week 13/2021.
- The influenza epidemic in the European Region has usually peaked and started to decline by this point in the year but, despite widespread and regular testing for influenza viruses, reported influenza activity has remained at a very low level throughout the season, likely due to the impact of the various public health and social measures implemented to reduce transmission of SARS-CoV-2.
- The COVID-19 pandemic had affected healthcare seeking behaviours, healthcare provision, and testing practices and capacities in countries and areas of the European Region, which negatively impacted on the collection of influenza epidemiologic and virologic data from March 2020. However, surveillance improved over the course of the 2020-2021 season and although there was a small decrease in the number of samples tested (~20%) as compared with previous seasons, there was remarkable decrease (>99%) in the number of influenza infections detected, with numbers detected on a weekly basis being similar to those reported during interseasonal periods.

Other news

The World Health Organization categorized COVID-19 as a pandemic on 11 March 2020. For more information about the 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

Of 37 countries and areas reporting on intensity of activity, 33 reported baseline (across the region) and 4 (Azerbaijan, Estonia, Slovakia and Ukraine) reported low intensity for week 13/2021 (Fig. 1).

Of 38 countries and areas that reported on geographic spread, 34 reported no activity and 4 (Azerbaijan, Luxembourg, Portugal, United Kingdom (Scotland)) reported sporadic spread for week 13/2021 (Fig. 2).

Please note:

1. 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, including SARS-CoV-2, leading to observed increases in the absence of influenza virus detections.
2. 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.

Fig. 1. Intensity in the European Region, week 13/2021

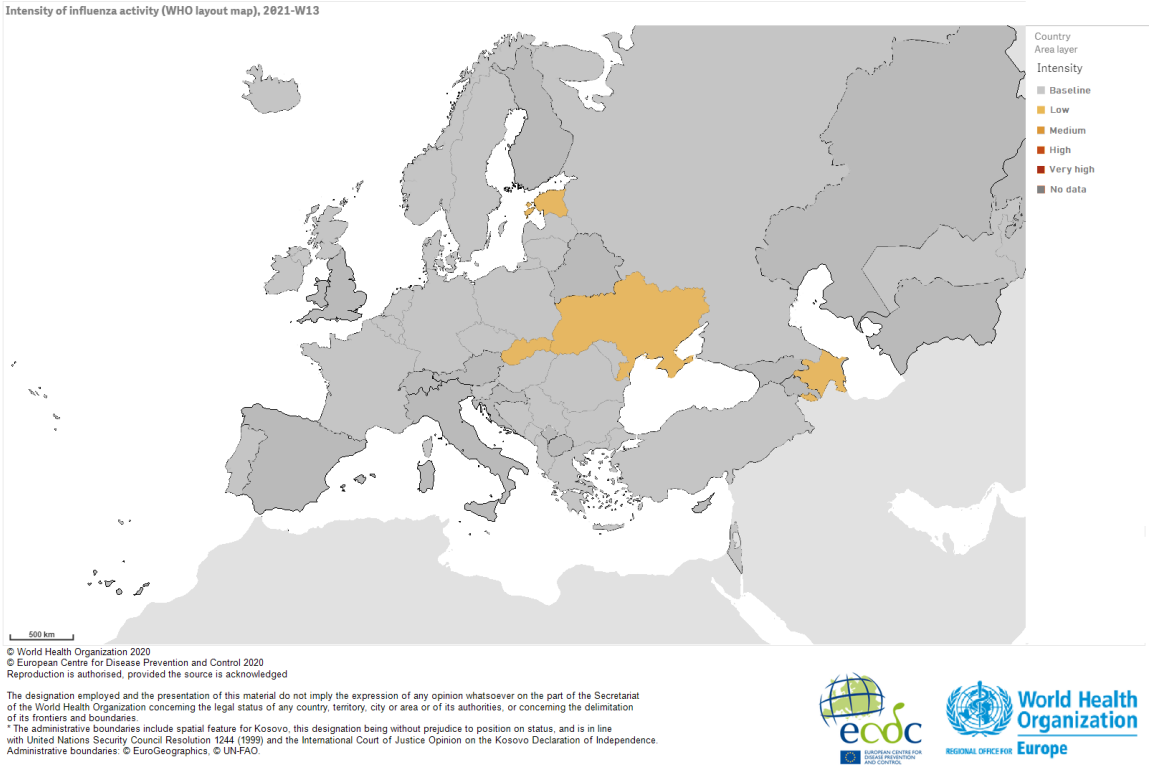
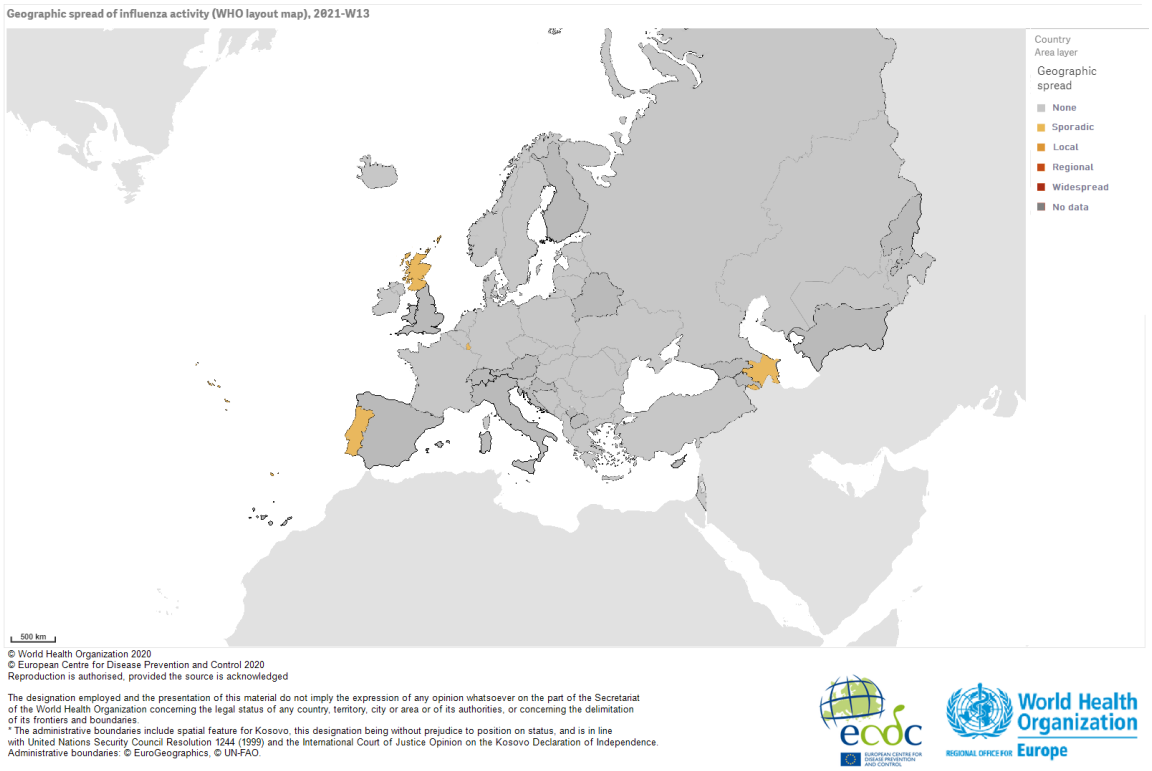


Fig. 2. Geographic spread in the European Region, week 13/2021



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

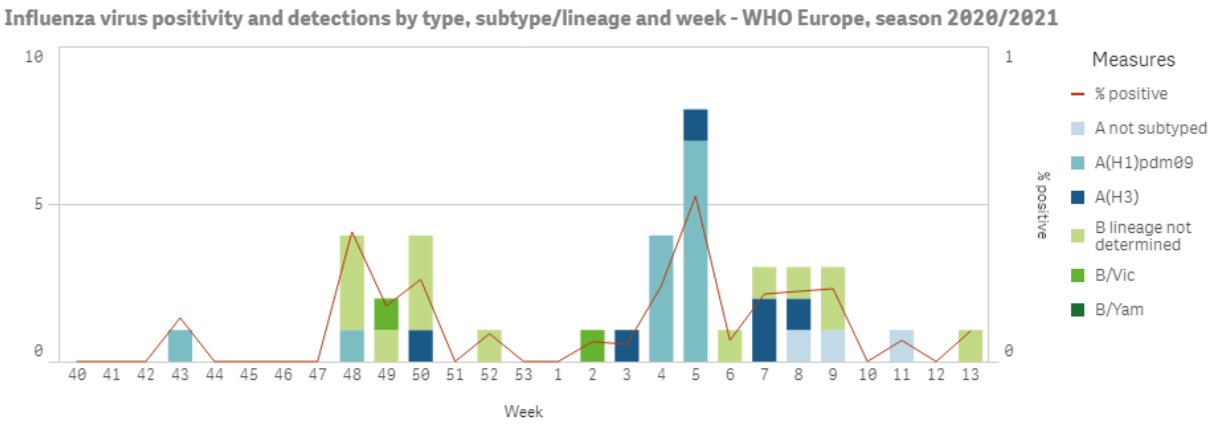
2020-2021 season overview

- For the Region as a whole, influenza activity has been at baseline level since the start of the season.
- In total, 785 specimens have tested positive for influenza viruses, 38 from sentinel sources and 747 from non-sentinel sources, with type A (both subtypes) and type B (both lineages) viruses being detected.
- Since the start of the season, few hospitalized laboratory-confirmed influenza cases have been reported: 11 from ICUs (all infected with type A viruses); 10 (all type A viruses) in wards outside ICUs; and 20 from severe acute respiratory infection (SARI)-based surveillance (19 infected with type A viruses and 1 with type B).

Influenza positivity

As of week 13/2021, for the European Region, influenza virus positivity in sentinel specimens remained below the epidemic threshold, which is set at 10% (Fig. 3.).

Fig. 3. Influenza virus detections in sentinel-source specimens by type and subtype, and week for weeks 40/2020-13/2021



External data sources

Mortality monitoring: Overall pooled estimates for 26 countries or areas participating in the EuroMOMO project have now returned to normal levels following a period of substantial excess mortality observed in some countries. However, a few countries may still have some excess mortality.

Primary care data

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

For week 13/2021, of 1 019 sentinel specimens tested for influenza viruses one was positive. Since the start of the season, of 32 556 sentinel-source specimens tested for influenza viruses, 38 were positive (22 type A and 16 type B viruses) (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 13/2021 and cumulatively for the influenza season 2020-2021

	Current Week (13)		Influenza Season 2020-2021	
Virus type and subtype	**Number**	**%[a]**	**Number**	**%[a]**
Influenza A	**0**	**0**	**22**	**57.9**
A(H1)pdm09	0	-	13	68.4
A(H3)	0	-	6	31.6
A not subtyped	0	-	3	-
Influenza B	**1**	**100**	**16**	**42.1**
B/Victoria lineage	0	-	2	100
B/Yamagata lineage	0	-	0	0
Unknown lineage	1	-	14	-
Total detections (total tested)	**1 (1 019)**	**0.1**	**38 (32 556)**	**0.1**

[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. For week 13/2021, data reported from 8 countries representing between 474 and 41 487 active participants per country were included, for a total of 77 768 participants.

Pooled estimates of Influenza-like illness activity for the countries participating in the Influenzanet network are low (below the first quartile of historical data for this week).

Pooled estimates of COVID-19 activity for the countries participating in the Influenzanet network have been stable with respect to previous weeks. Incidence rates were estimated between 6 and 80 possible cases per 1 000 weekly participants.

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

There were no reports of hospitalized laboratory-confirmed influenza cases in ICUs during week 13/2021.

Since the start of the season, there have been 11 hospitalized laboratory-confirmed influenza cases in ICUs (9 from the United Kingdom (England) and 2 from Ukraine; all were infected with type A viruses and 1 from Ukraine was subtyped as A(H1)pdm09). Of two cases with known age, one was a patient in the 15-64 years age group and one was a patient in the 65 years and over age group. All cases were non-fatal.

1.2) Hospitalized laboratory-confirmed influenza cases – other wards

There were no reports of hospitalized laboratory-confirmed influenza cases in other wards during week 13/2021.

Since the start of the season, there have been 10 laboratory-confirmed influenza cases (all were infected with type A viruses) in wards outside ICUs reported by Ukraine: 7 viruses were subtyped as A(H1)pdm09. Four cases were in children between 0-4 years old, 4 cases were in patients aged 15-64 years and two cases were in patients in the 65 years and over age group. All cases were non-fatal.

Severe acute respiratory infection (SARI)-based hospital surveillance

For week 13/2021, 1 203 SARI cases were reported by 10 countries or areas. Of 295 specimens tested for influenza viruses, none were positive.

For the season to date, 13 countries and areas (Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kosovo (in accordance with UN Security Council resolution 1244 (1999)), Republic of Moldova, Russian Federation, Serbia, Ukraine and Uzbekistan) have reported 35 697 SARI cases and 10 506 were tested for influenza viruses. To date, 20 specimens have tested positive for influenza viruses: 12 from Ukraine (8 were A(H1)pdm09 viruses and 4 were type A, not subtyped), 7 from Armenia (all A(H3) subtype) and 1 from Azerbaijan (a B/Victoria lineage virus).

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 13/2021, 4 of 28 423 non-sentinel specimens (from 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: all were type B (Table 2). Table 2. Influenza virus detections in non-sentinel source specimens by type and subtype, week 13/2021 and cumulatively for the influenza season 2020-2021

Since the beginning of the season, 747 of 594 784 non-sentinel specimens tested positive for influenza viruses; 370 (49.5%) were type A and 377 (50.5%) type B. Of 70 subtyped A viruses, 29 (41.4%) were A(H1)pdm09 and 41 (58.6%) were A(H3). Of 377 type B viruses, only 14 were ascribed to a lineage: 11 B/Victoria and 3 B/Yamagata.

Table 2. Influenza virus detections in non-sentinel source specimens by type and subtype, week 13/2021 and cumulatively for the influenza season 2020-2021

	Current Week (13)		Influenza Season 2020-2021	
Virus type and subtype	**Number**	**%[a]**	**Number**	**%[a]**
Influenza A	**0**	**0**	**370**	**49.5**
A(H1)pdm09	0	-	29	41.4
A(H3)	0	-	41	58.6
A not subtyped	0	-	300	-
Influenza B	**4**	**100**	**377**	**50.5**
B/Victoria lineage	0	-	11	78.6
B/Yamagata lineage	0	-	3	21.4
Unknown lineage	4	-	363	-
Total detections (total tested)	**4 (28 423)**	**-**	**747 (594 784)**	**-**

[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

Since week 40/2020, 11 viruses have been characterised genetically:

- 5 type A: 4 influenza A(H3) with 2 attributed to the HA subgroup 3C.2a1b + T131K-A, represented by A/Slovenia/1637/2020, 1 attributed to the HA subgroup 3C.2a1b + T135K-A, represented by A/Denmark/3264/2019 and 1 attributed to the HA subgroup 3C.2a1b+T135K-B represented by A/Hong Kong/2671/2019; and 1 A(H1)pdm09 attributed to the group 6B.1A5A + 187V/A represented by A/Guangdong-Maonan/SWL1536/2019.
- 6 type B: 2 B(Vic)-lineage clade 1A(Δ3)B represented by B/Washington/02/2019 and 4 B(Vic) that were not assigned to any clade.

ECDC published the February 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

Since the beginning of the season, 4 influenza viruses have been tested for susceptibility to neuraminidase inhibitors: 2 influenza A(H3) viruses and 2 influenza B/Victoria viruses for which sequence analysis indicated normal inhibition by both oseltamivir and zanamivir.

Vaccine

Available vaccines in Europe

https://www.ecdc.europa.eu/en/seasonal-influenza/prevention-and-control/vaccines/types-of-seasonal-influenza-vaccine

Vaccine composition

On 28 February 2020, WHO published recommendations for the components of influenza vaccines for use in the 2020–2021 northern hemisphere influenza season.

Egg-based vaccines should contain the following:

- an A/Guangdong-Maonan/SWL1536/2019 (H1N1)pdm09-like virus (Clade 6B.1A5A+187A);
- an A/Hong Kong/2671/2019 (H3N2)-like virus (Clade 3C.2a1b+T135K-B);
- a B/Washington/02/2019 (B/Victoria lineage)-like virus (Clade 1A(Δ3)B); and
- a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus (Clade 3).

Cell- or recombinant-based vaccines should contain the following:

- an A/Hawaii/70/2019 (H1N1)pdm09-like virus (Clade 6B.1A5A+187A);
- an A/Hong Kong/45/2019 (H3N2)-like virus (Clade 3C.2a1b+T135K-B);
- a B/Washington/02/2019 (B/Victoria lineage)-like virus (Clade 1A(Δ3)B); and
- a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus (Clade 3).

It was recommended that the influenza B virus component of **both trivalent vaccine types** for use in the 2020–2021 northern hemisphere influenza season should be a B/Washington/02/2019-like virus of the B/Victoria-lineage.

The full report and Frequently Asked Questions for the 28 February 2020 decision are available on the WHO website.

On 25 September 2020, WHO published recommendations for the components of influenza vaccines for use in the 2021 southern hemisphere influenza season:

Egg-based Vaccines

- an A/Victoria/2570/2019 (H1N1)pdm09-like virus;
- an A/Hong Kong/2671/2019 (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/Hong Kong/45/2019 (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 southern hemisphere influenza season should be a B/Washington/02/2019-like virus of the B/Victoria-lineage. 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, Andrew Amato, Favelle Lamb and Angeliki Melidou) and the WHO Regional Office for Europe (Piers Mook and Richard Pebody). It was reviewed by experts from the network (Adam Meijer, National Institute for Public Health and the Environment (RIVM), the Netherlands); Rod Daniels and John McCauley, WHO Collaborating Centre for Reference and Research on Influenza, Francis Crick Institute, United Kingdom.

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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