Flu News Europe

Joint ECDC–WHO/Europe weekly influenza update

Summary

Week 43/2017 (23–29 October 2017)

- Intensity of influenza activity in Europe is still low.
- Sporadic or local influenza virus detections were reported by 10 out of 38 countries reporting on this indicator.
- Overall, 2.5% of sentinel specimens tested positive for influenza virus.
- Data from the 19 countries or regions reporting to the EuroMOMO project indicated that all-cause mortality was at expected levels for this time of the year.
- Additional information on global influenza activity is available from WHO's biweekly global updates.

2017/18 season overview

- Since week 40/2017, only few influenza viruses have been detected in sentinel specimens.
- Due to changes in A(H3N2) influenza viruses that circulated during the recent 2017 Southern Hemisphere season and reports of low vaccine effectiveness against this strain, WHO recommended changing the A(H3N2) component in seasonal influenza vaccines for use in the 2018 Southern Hemisphere influenza season. In addition, the influenza B lineage in trivalent vaccines was changed to a B/Yamagata-lineage virus. This represents two changes compared to the current trivalent vaccine recommended for the 2017–2018 Northern Hemisphere influenza season. See also the ECDC summary report for September and the ECDC commentary.
- A report on the antigenic and genetic characteristics of zoonotic influenza viruses and development of candidate vaccine viruses developed for potential use in human vaccines is available here.

Primary care data

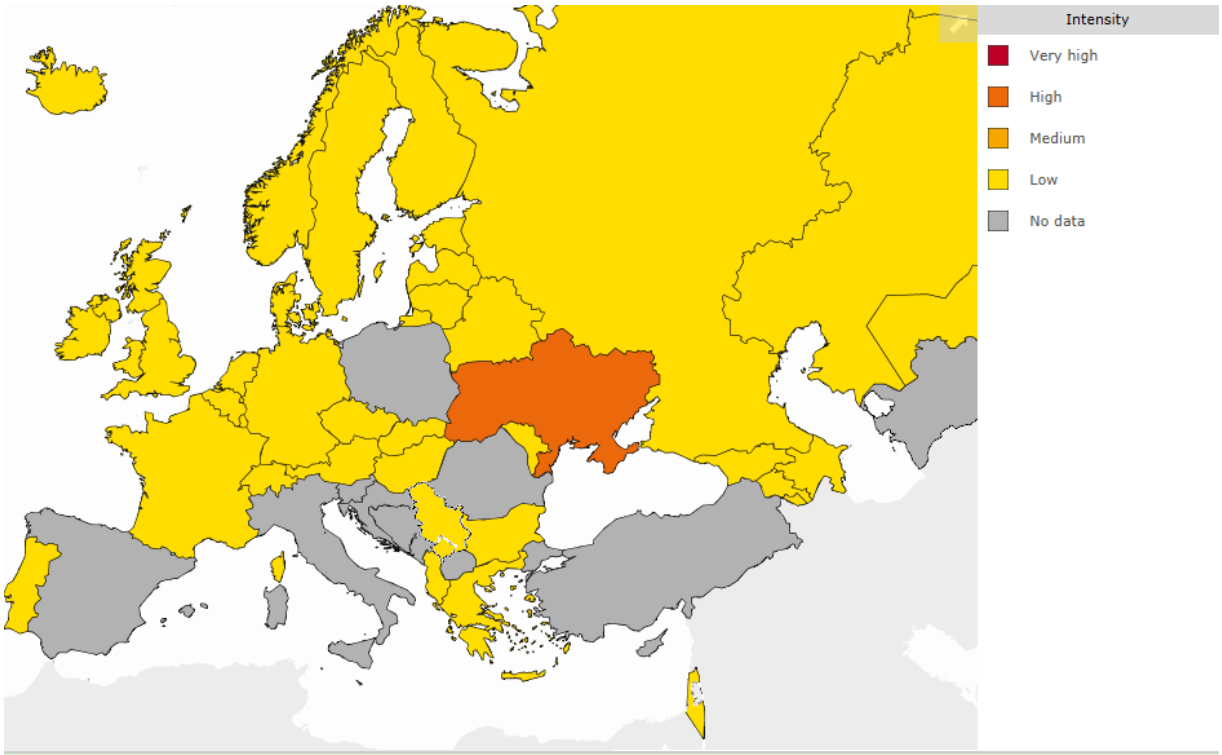
Influenza activity

For week 43/2017, low intensity of influenza activity was reported by all of the 42 reporting countries (Fig. 1).

No geographic spread was reported by 28 countries, while sporadic or local geographic spread was reported by 10 countries (Fig. 2).

Maps of qualitative indicators in the European Region

Fig. 1 Intensity in the European Region, week 43/2017*



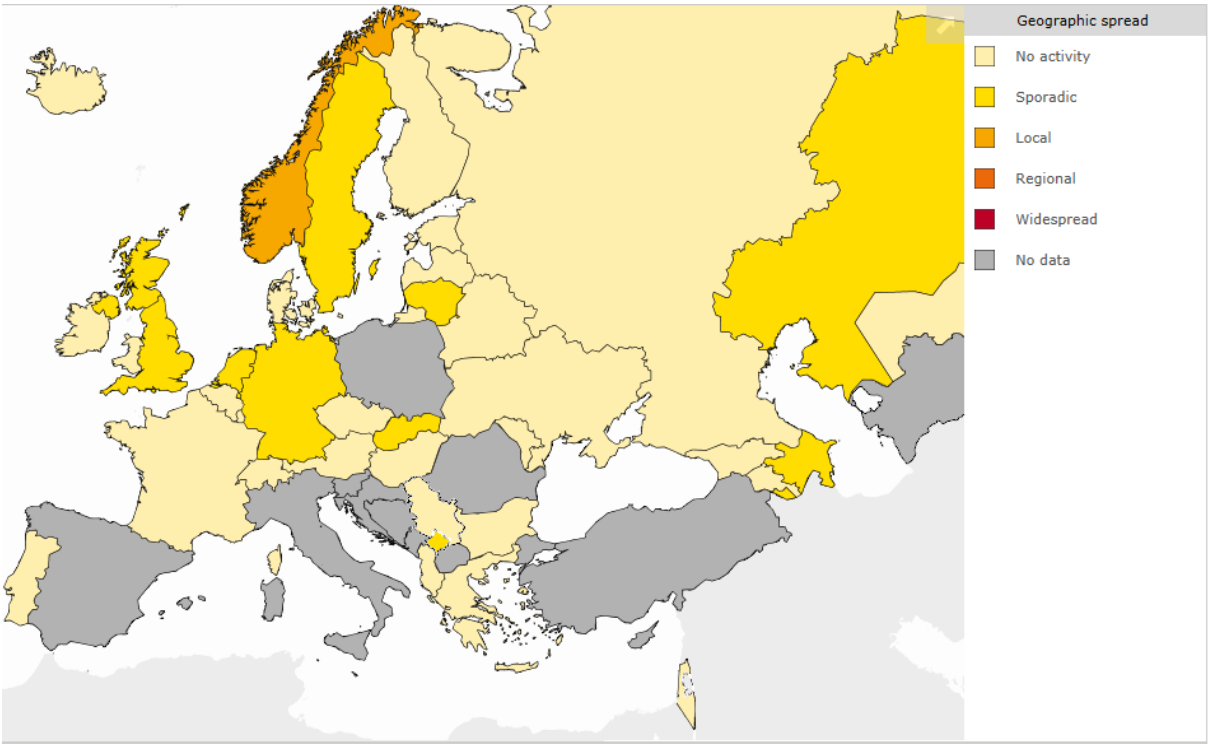
Map disclaimer

The designation employed and the presentation of this material do not imply the expression of any opinion whatsoever on the part of the Secretariat of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries.

** The administrative boundaries include spatial feature for Kosovo, this designation being without prejudice to position on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.*
Administrative boundaries: © EuroGeographics, © UN-FAO.

*Erratum: the high influenza activity as reported for Ukraine is not correct. This should be low intensity.

Fig. 2 Geographic spread in the European Region, week 43/2017



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

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

For week 43/2017, 15 (2.5%) of 601 sentinel specimens tested positive for influenza viruses: 3 unsubtyped A viruses, 3 A(H3N2), 2 A(H1N1)pdm09, 1 B/Victoria lineage and 6 B viruses not ascribed to a lineage (

Fig. 3 and Table 1).

Since week 40/2017, 58% of detected viruses were type A and 42% type B. Of subtyped A viruses (n=40), two thirds were A(H3N2). Of the 10 B viruses ascribed to a lineage, 9 were B/Yamagata (Table 1).

Fig. 3 Influenza virus detections in sentinel-source specimens by type and subtype, by week

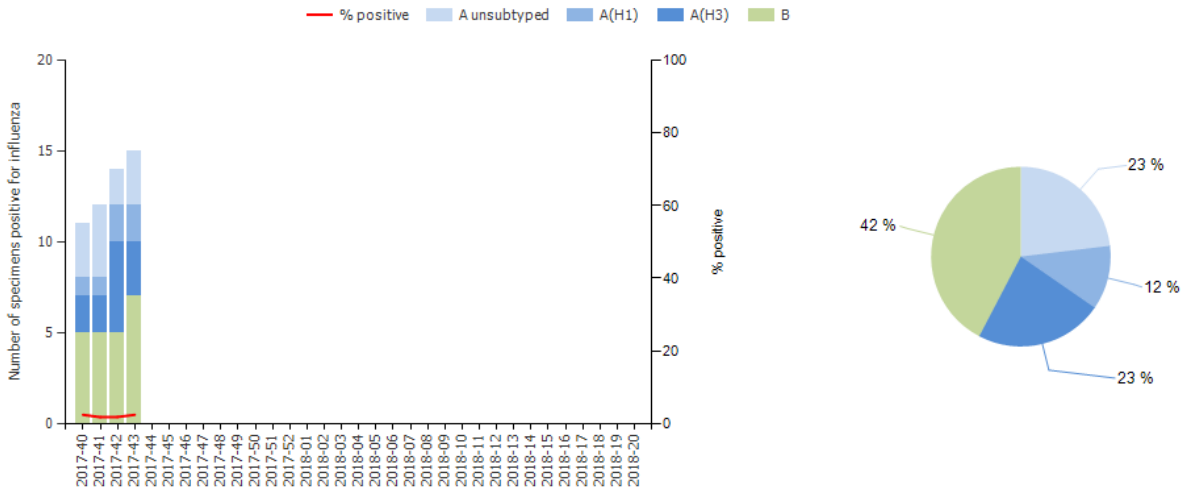

Table 1. Influenza virus detections in sentinel-source specimens by type and subtype, week 43/2017 and cumulatively

	Current Week		Season 2017-2018	
Virus type and subtype	**Number**	**%[a]**	**Number**	**%[a]**
Influenza A	**8**	**53.3**	**30**	**57.7**
A(H1N1)pdm09	2	40	6	33.3
A(H3N2)	3	60	12	66.7
A not subtyped	3	-	12	-
Influenza B	**7**	**46.7**	**22**	**42.3**
B/Victoria lineage	1	100	1	10
B/Yamagata lineage			9	90
Unknown lineage	6	-	12	-
Total detections (total tested)	**15 (601)**	**2.5**	**52 (2 442)**	**2.1**

[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.

Severity

Since week 40/2017, 34 laboratory-confirmed hospitalized influenza cases in intensive care units or other wards have been reported: 31 cases in ICU (15 in the United Kingdom and 16 in Ireland) and three in other wards (2 in Ireland and 1 in the Czech Republic). Of these 34 cases, 25 (74%) were found to be infected with type A viruses and 9 (26%) with type B viruses. Of subtyped A viruses, 6 (60%) were A(H1N1)pdm09 and 4 (40%) were A(H3N2) viruses.

For week 43/2017, 783 cases of severe acute respiratory infections (SARI) were reported by 10 countries conducting sentinel SARI surveillance. Of the 210 specimens tested for influenza viruses, all were negative. Since week 40/2017, out of 2 632 SARI cases reported, 671 were tested for influenza viruses and 4 were positive (1 A not sub-typed, 1 A(H3N2) and 2 type B).

Mortality monitoring

Data from 19 countries or regions reporting to the EuroMOMO project were received for week 43/2017 and included in the pooled analyses of excess all-cause mortality. All-cause mortality was at expected levels for this time of year in the participating countries.

Virus characteristics

Viruses detected in non-sentinel-source specimens

For week 43/2017, at least 9 058 specimens from non-sentinel sources were tested (such as hospitals, schools, non-sentinel primary care facilities, nursing homes and other institutions), of which 98 were positive for influenza viruses. Of these 98 detections, 73.5% were type A and 26.5% type B viruses (Table 2). Among subtyped A viruses (n=14), 71% were A(H3N2) viruses.

Table 2. Influenza virus detections in non-sentinel-source specimens by type and subtype, week 43/2017 and cumulatively

	Current Week		Season 2017-2018	
Virus type and subtype	**Number**	**%[a]**	**Number**	**%[a]**
Influenza A	**72**	**73.5**	**319**	**72**
A(H1N1)pdm09	4	28.6	20	15.4
A(H3N2)	10	71.4	110	84.6
A not subtyped	58	-	189	-
Influenza B	**26**	**26.5**	**124**	**28**
B/Victoria lineage	1	100	1	16.7
B/Yamagata lineage			5	83.3
Unknown lineage	25	-	118	-
Total detections (total tested)	**98 (9 058)**	**-**	**443 (36 526)**	**-**

[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; as not all countries have a true non-sentinel testing denominator, no percentage calculations for total tested are shown

Genetic characterization

For week 43/2017, no genetic characterizations have been reported. The latest characterization data are summarised in the ECDC summary report for September.

The recommended composition of trivalent influenza vaccines for the 2017–2018 season in the Northern Hemisphere includes an A/Michigan/45/2015 (H1N1)pdm09-like virus; an A/Hong Kong/4801/2014 (H3N2)-like virus; and a B/Brisbane/60/2008-like virus (B/Victoria

lineage). For quadrivalent vaccines, a B/Phuket/3073/2013-like virus (B/Yamagata lineage) was recommended. On 28 September 2017, WHO announced the recommended vaccine composition for the 2018 season in the Southern Hemisphere. The recommendations matched the A(H1N1)pdm09 component for the 2017–2018 Northern Hemisphere season, but the A(H3N2) component was changed to an A/Singapore/INFIMH-16-0019/2016 (H3N2)-like virus and the B component in trivalent vaccines was switched to a B/Yamagata-lineage virus. This indicates that the circulating H3 strains have drifted antigenically further away from the strain included in the Northern Hemisphere vaccine.

Antiviral susceptibility testing

No viruses with collection dates in weeks 40–43/2017 have been tested for antiviral susceptibility.

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