

## Summary

### Week 46/2016 (14–20 November 2016)

- Influenza activity remained at baseline intensity levels in the region.
- The total number of virus detections among sentinel surveillance specimens increased to 10%, reaching a threshold indicative of increasing regional activity.
- The majority of viruses detected this week were influenza A(H3N2).

### Season overview

- This is the earliest that the 10% positivity has been reached since the emergence of A(H1N1)pdm09 viruses in the 2009-2010 influenza season, while in the last five seasons it was passed between weeks 49 and 51.
- Since week 40/2016, influenza A viruses have predominated, with most of those subtyped being A(H3N2).
- Few influenza-confirmed cases have been reported from hospital settings so far.

## Primary care data

### Influenza activity

Influenza activity is beginning to increase in some countries in week 46/2016; virus detections have increased to or above 10% among sentinel specimens in 11 countries across the Region but only three of these countries reported more than 10 influenza detections. Influenza activity is at baseline intensity levels, with 44 countries reporting low intensity and the Netherlands reporting medium intensity (Fig. 1). Of the 24 countries reporting any geographic spread of influenza, one (the Netherlands), four and 19 reported regional, local and sporadic spread, respectively. Countries across Europe are experiencing increasing influenza activity as per primary care indicators. The epidemic threshold was surpassed for the second week in a row in Armenia.

Of the 38 countries reporting virologic data from sentinel sources, 18 had influenza virus detections. These countries are in the northern, western and southern European as well as central Asia and the Caucasus. Of the 24 countries reporting regional/local/sporadic geographic spread, 14 reported virus detections.

## Map of qualitative indicators in the European Region

Fig. 1. Intensity in the European Region, week 46/2016

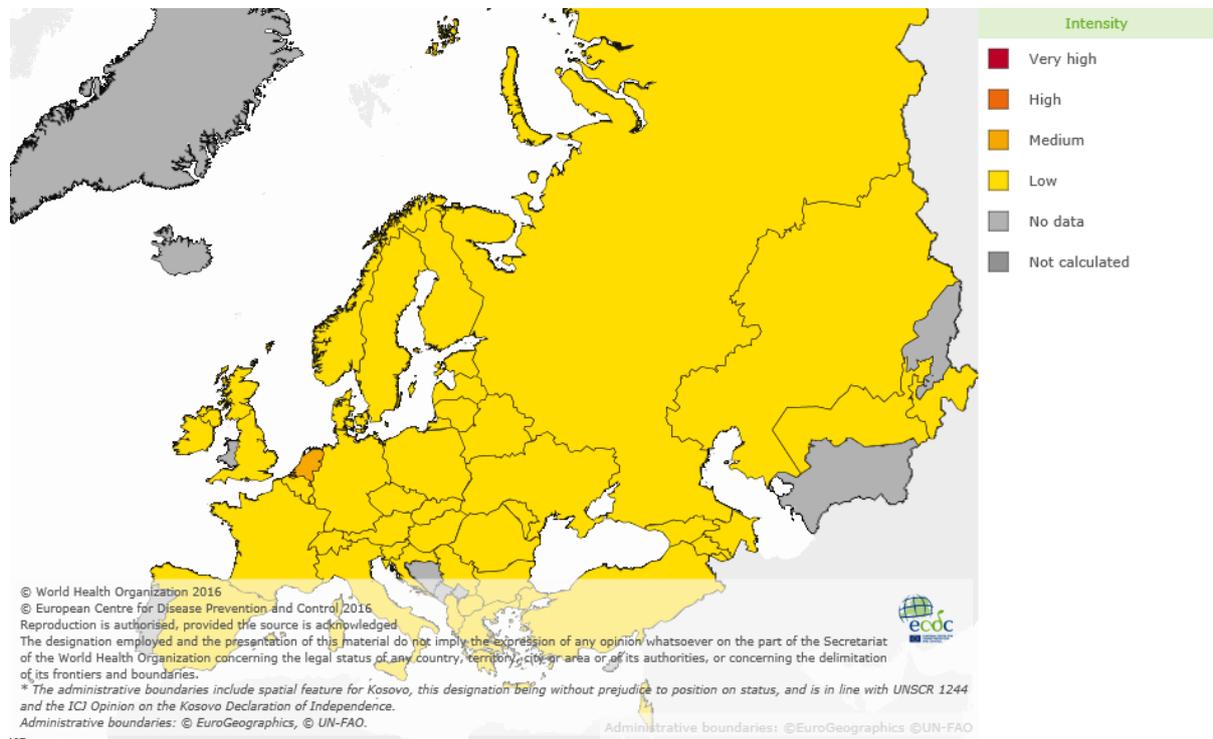
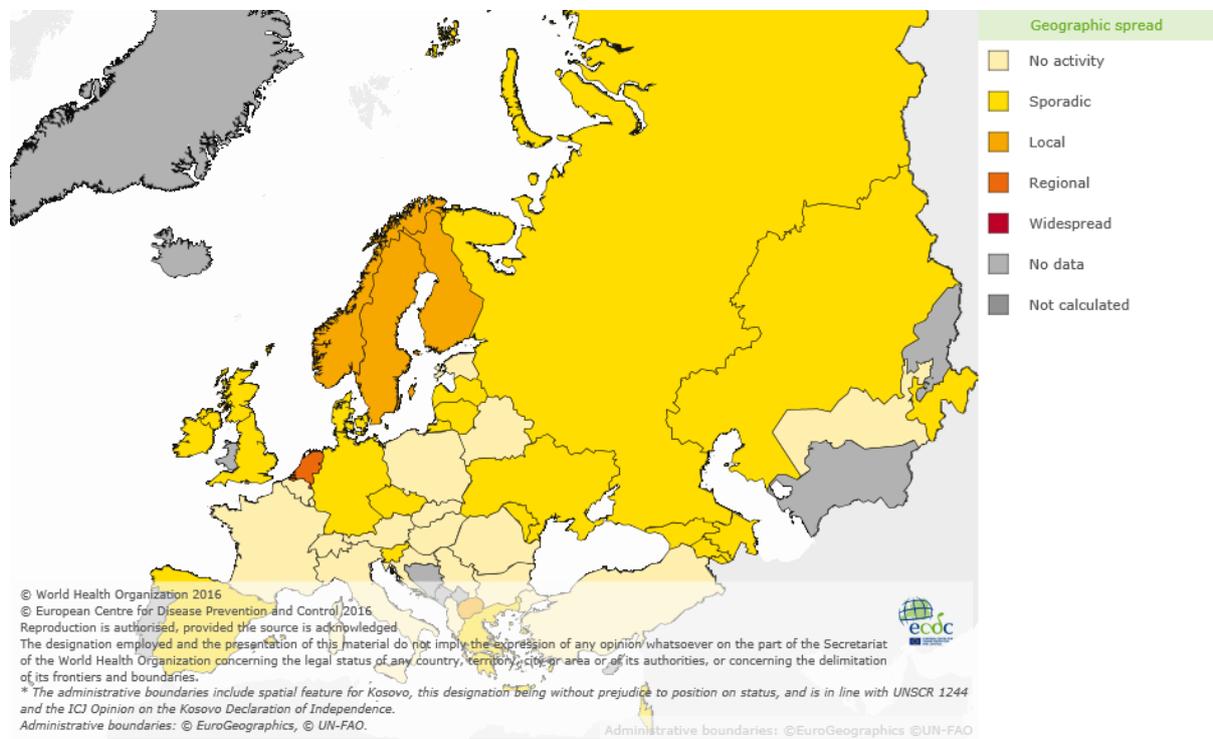


Fig. 2. Geographic spread in the European Region, week 46/2016



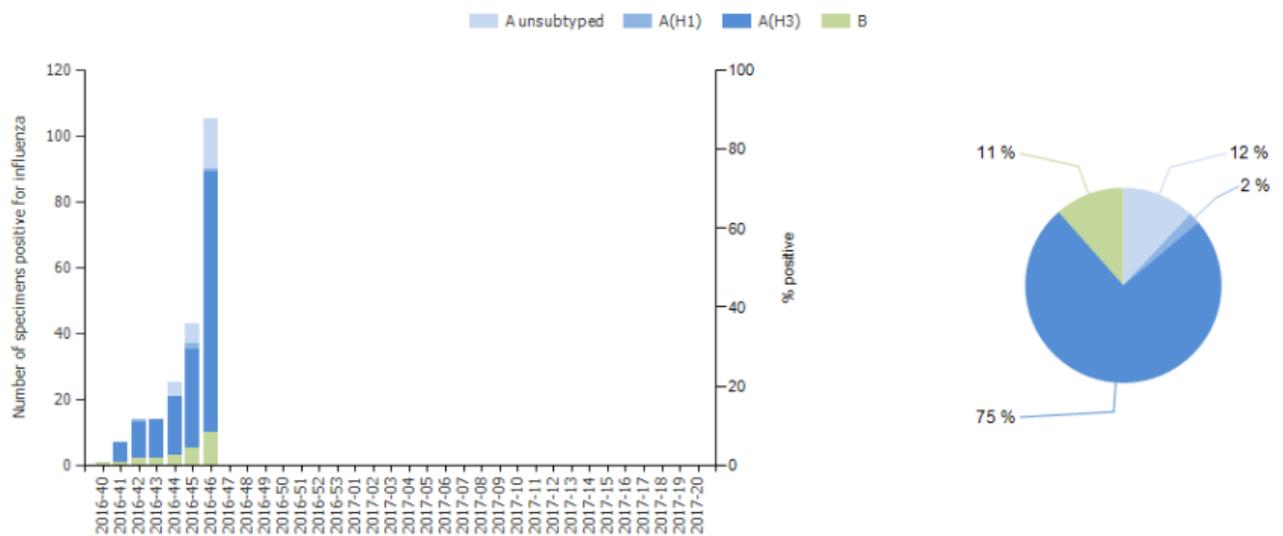
For interactive maps of influenza intensity and geographic spread, please see the Flu News Europe [web site](#).

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

For week 46/2016, 106 of 1 020 (10%) sentinel specimens tested positive for influenza virus (Table 1). Of these, 91% were type A and 9% were type B. All but one of the subtyped influenza A viruses were A(H3N2). The lineage of only one of the 11 influenza B viruses was determined, it being B/Victoria. Armenia, Finland, France, Georgia, Ireland, Kazakhstan, Kyrgyzstan, the Netherlands, Norway, Portugal and Spain reported proportions of detections of influenza viruses higher than 10% of sentinel specimens tested; only Armenia, France and Spain reported more than 10 specimens detected and accounted for approximately 60% of all sentinel detections.

Similar distributions of types and subtypes have been observed since week 40/2016; with the majority (99%) of detected and subtyped viruses being subtype A(H3N2) (Fig. 3; Table 1). The lineages of two of 26 influenza B viruses have been determined in the course of the season with one falling in each of the two lineages.

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



**Table 1. Influenza virus detections in sentinel-source specimens by type and subtype, week 46/2016 and cumulatively**

Virus type and subtype	Number of detections	
	Current Week	Season 2016-2017
<b>Influenza A</b>	<b>95</b>	<b>185</b>
A(H1N1)pdm09	1	4
A(H3N2)	79	156
A not subtyped	15	25
<b>Influenza B</b>	<b>11</b>	<b>26</b>
B/Victoria lineage	0	1
B/Yamagata lineage	1	1
Unknown lineage	10	24
<b>Total detections (total tested)</b>	<b>106 (1 020)</b>	<b>211 (5 638)</b>

## Severity

For week 46/2016, of those countries, territories and regions that conduct surveillance based on hospitalized laboratory-confirmed influenza cases in intensive care units (ICU) or other wards, Ireland and the United Kingdom reported six cases in other wards, five due to type A and one due to type B virus infection. Since week 40/2016 Spain, Ireland and the United Kingdom have reported 29 cases in other wards, 27 due to influenza type A and two due to type B virus infection. Four cases have been reported from ICU, with three being infected with type A and one with type B influenza virus.

For week 46/2016, of those countries, territories and regions that conduct surveillance based on sentinel severe acute respiratory infections (SARI), 17 influenza A virus-positive cases were reported by Armenia (14) and Ukraine (3). Of these, 16 were A(H3N2) and one was influenza A not subtyped.

## Mortality monitoring

Pooled analysis of data from the 18 countries or regions reporting to the [EuroMOMO](#) project indicated that all-cause mortality was within the normal range during recent weeks.

## Viruses detected in non-sentinel-source specimens

For week 46/2016, 435 specimens from non-sentinel sources (such as hospitals, schools, non-sentinel primary care units, nursing homes and other care institutions) tested positive

for influenza viruses (Table 2). Similar to the previous week, 96% were type A and 4% type B, with 93% of the subtyped influenza A viruses being A(H3N2).

Similar distributions of types and subtypes have been observed since week 40/2016 with A(H3N2) viruses being dominant throughout (Table 2). The distribution of viruses is comparable to that of sentinel surveillance data with 91% type A and 9% type B viruses. For the majority of viruses no subtype or lineage was determined; however, 87% of the subtyped influenza A viruses were A(H3N2). Of four type B viruses ascribed to a lineage, two were B/Yamagata lineage and two B/Victoria.

**Table 2. Influenza viruses detected in non-sentinel-source specimens, by virus (sub)type, week 46/2016 and cumulatively**

Virus type and subtype	Number of detections	
	Current Week	Season 2016-2017
<b>Influenza A</b>	<b>417</b>	<b>1119</b>
A(H1N1)pdm09	7	34
A(H3N2)	90	328
A not subtyped	320	757
<b>Influenza B</b>	<b>18</b>	<b>98</b>
B/Victoria lineage	0	2
B/Yamagata lineage	0	2
Unknown lineage	18	94
<b>Total detections (total tested*)</b>	<b>435 (10 171)</b>	<b>1217 (62 841)</b>

\* Not all countries have a true non-sentinel testing denominator and these figures are likely to be an underestimate.

## Virus characteristics

### Genetic characterization

The new genetic reporting categories for the 2016-2017 season are available and reporting of genetic characterization data has been possible since week 46/2016. No data on virus characterization have been reported so far.

The ECDC summary report for [September 2016](#) provides detailed genetic and antigenic analyses of viruses collected between January and June 2016.

The recommended composition of trivalent influenza vaccines for the 2016-2017 season in the [northern hemisphere](#) is for inclusion of an A/California/7/2009 (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) virus is recommended. The recommended influenza A(H1N1)pdm09 component of the 2017 [southern hemisphere](#) influenza vaccine is an A/Michigan/46/2015 (H1N1)pdm09-like virus, the first update since A(H1N1)pdm09 viruses emerged in 2009.

## Antiviral susceptibility testing

Reporting of antiviral susceptibility data will commence when test results become available.

*This weekly update was prepared by an editorial team at the European Centre for Disease Prevention and Control (Cornelia Adlhoch, Eeva Broberg, René Snacken) and the WHO Regional Office for Europe (Caroline Brown, Piers Mook, Dmitriy Pereyaslov and Tamara Meerhoff, Temporary Advisor to WHO). It was reviewed by country experts (AnnaSara Carnahan, Public Health Agency, Sweden; Veronica Eder, National Public Health Center, Republic of Moldova), and 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; Tyra Grove Krause, Statens Serum Institut and EuroMOMO network, Denmark).*

*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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