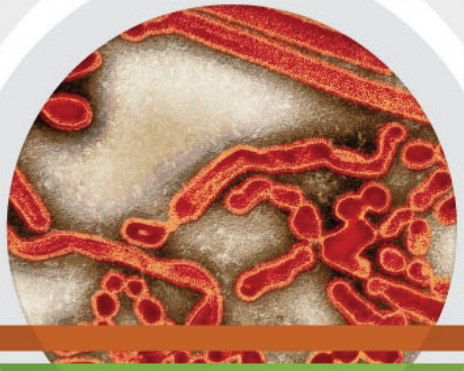


SURVEILLANCE REPORT

Weekly influenza surveillance overview

16 November 2012

Main surveillance developments in week 45/2012 (5–11 November 2012)

This first page contains the main developments for this week and can be printed separately or together with the more detailed information that follows.

- During week 45/2012, all 27 countries reporting clinical data had low-intensity influenza activity, the lowest category
- Five countries reported increasing trends in respiratory illness, but not necessarily related to confirmed influenza
- Of 386 sentinel specimens, 13 (3.4%) were positive for influenza virus, nine type A and four type B.
- No hospitalised laboratory-confirmed influenza cases were reported.

Despite some indications of rising rates of influenza-like illness in five countries in week 45, there is no suggestion that substantial influenza transmission has begun in any European country as yet. The rising rates in five countries are likely to be explained by other respiratory viruses.

Sentinel surveillance of influenza-like illness (ILI)/ acute respiratory infection (ARI): Influenza activity of low intensity was notified by all 27 countries reporting, with the majority of them indicating no geographic spread. For more information, **click here**.

Virological surveillance: Twenty-one countries reported virology data. Sentinel physicians collected 386 specimens with a slightly increased percentage testing positive for influenza virus (3.4%) compared to the previous week (0.7%). For more information, **click here**.

Hospital surveillance of influenza laboratory-confirmed cases: During week 45/2012, no hospitalised laboratory-confirmed influenza cases were reported. For more information, **click here**.

Sentinel surveillance (ILI/ARI)

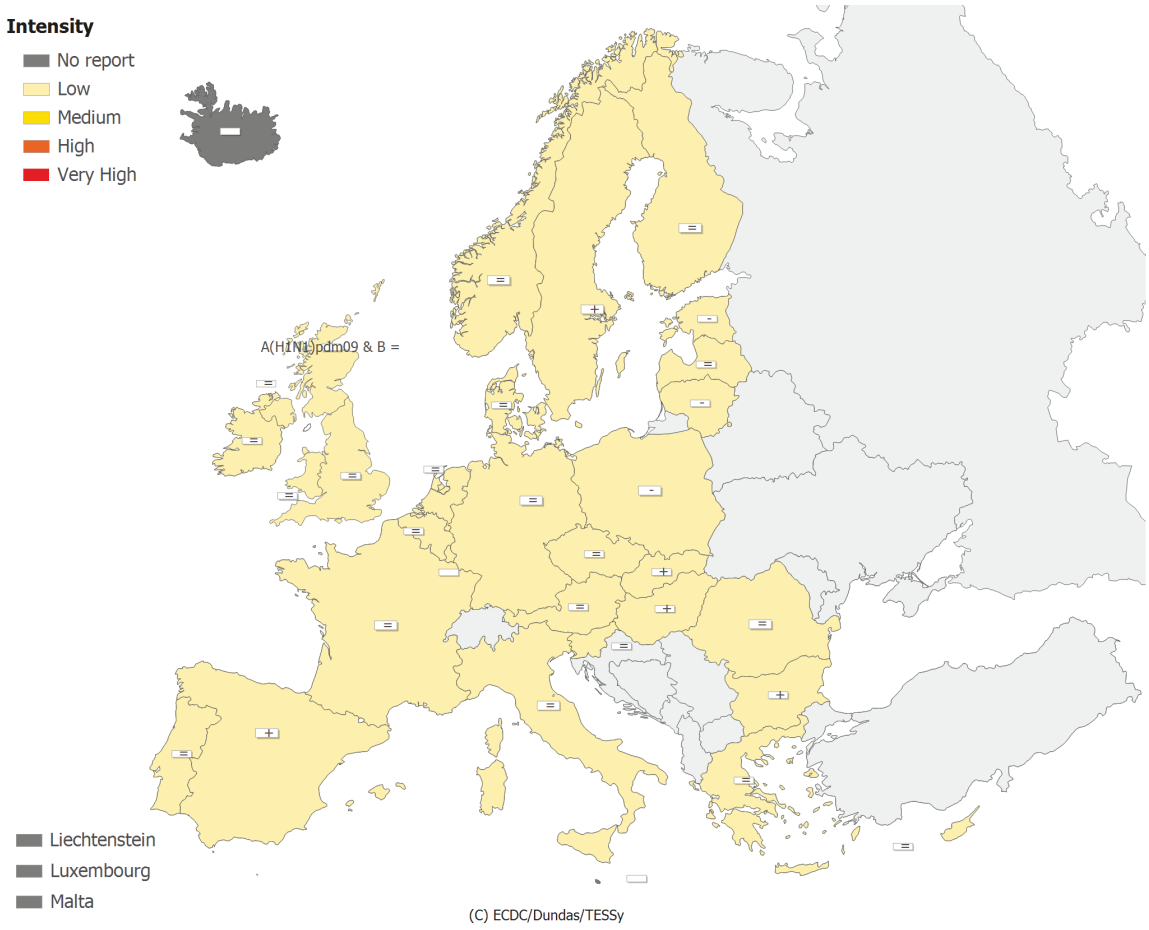
Weekly analysis – epidemiology

During week 45/2012, all 27 countries reporting clinical data experienced low-intensity influenza activity (Table 1, Map 1).

Geographic spread was reported as sporadic by nine countries and the UK (England, Scotland), while 17 countries and the UK (Northern Ireland, Wales) reported no geographic spread (Table 1, Map 2).

Stable trends in clinical activity were reported by 18 countries while increasing trends were reported by Bulgaria, Hungary, Slovakia, Spain and Sweden. A decreasing trend was reported by Estonia, Lithuania and Poland (Table 1, Map 2). Such trends are normal for this time of the year when the influenza virus is not circulating widely.

Map 1. Intensity for week 45/2012

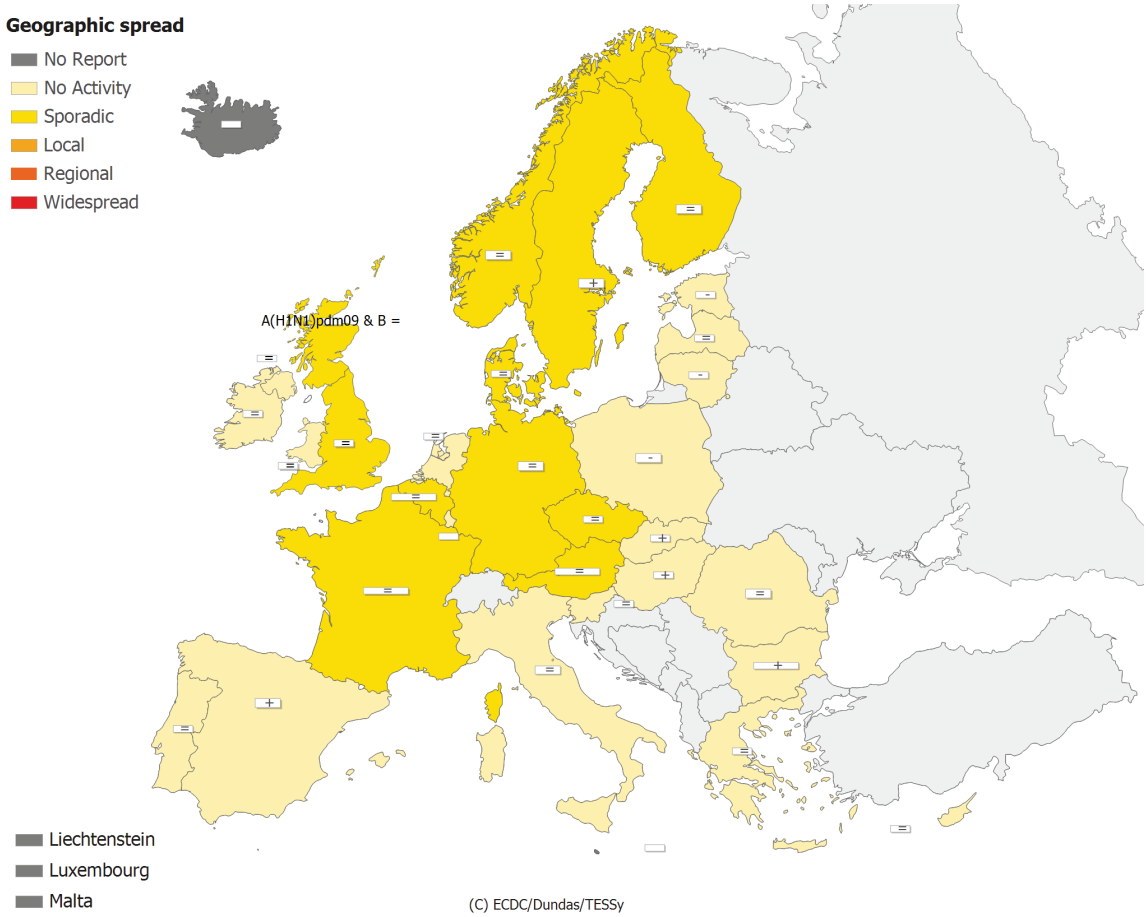


* A type/subtype is reported as dominant when at least ten samples have been detected as influenza positive in the country and of those > 40 % are positive for the type/subtype.

Legend:

No report	Intensity level was not reported	**+**	Increasing clinical activity
Low	No influenza activity or influenza at baseline levels	**-**	Decreasing clinical activity
Medium	Usual levels of influenza activity	**=**	Stable clinical activity
High	Higher than usual levels of influenza activity	**A(H1N1)pdm 09 & B**	Type B and Type A, Subtype (H1N1)pdm09
Very high	Particularly severe levels of influenza activity		

Map 2. Geographic spread for week 45/2012



* A type/subtype is reported as dominant when at least ten samples have been detected as influenza positive in the country and of those > 40 % are positive for the type/subtype.

Legend:

No report	Activity level was not reported
No activity	No evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic	Isolated cases of laboratory confirmed influenza infection
Local outbreak	Increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region (laboratory confirmed)
Regional activity	Influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population (laboratory confirmed)
Widespread	Influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population (laboratory confirmed)

+	Increasing clinical activity
-	Decreasing clinical activity
=	Stable clinical activity
A(H1N1)pdm 09 & B	Type B and Type A, Subtype (H1N1)pdm09

Table 1. Epidemiological and virological overview by country, week 45/2012

Country	Intensity	Geographic spread	Trend	No. of sentinel swabs	Dominant type	Percentage positive	ILI per 100 000	ARI per 100 000	Epidemiological overview	Virological overview
Austria	Low	Sporadic	Stable	5	None	20.0	19.2	-	Graphs	Graphs
Belgium	Low	Sporadic	Stable	12	None	8.3	58.0	1698.2	Graphs	Graphs
Bulgaria	Low	No activity	Increasing	0	None	0.0	0.0	864.5	Graphs	Graphs
Cyprus	Low	No activity	Stable	-	-	0.0	-*	-*	Graphs	Graphs
Czech Republic	Low	Sporadic	Stable	14	None	21.4	21.8	811.2	Graphs	Graphs
Denmark	Low	Sporadic	Stable	8	None	0.0	24.4	-	Graphs	Graphs
Estonia	Low	No activity	Decreasing	3	None	0.0	4.0	206.1	Graphs	Graphs
Finland	Low	Sporadic	Stable	14	None	7.1	-	-	Graphs	Graphs
France	Low	Sporadic	Stable	62	None	1.6	-	1639.9	Graphs	Graphs
Germany	Low	Sporadic	Stable	45	None	4.4	-	1102.0	Graphs	Graphs
Greece	Low	No activity	Stable	0	None	0.0	33.5	-	Graphs	Graphs
Hungary	Low	No activity	Increasing	10	-	0.0	50.9	-	Graphs	Graphs
Iceland				0	-	0.0	-	-	Graphs	Graphs
Ireland	Low	No activity	Stable	5	None	0.0	4.1	-	Graphs	Graphs
Italy	Low	No activity	Stable	-	-	0.0	65.5	-	Graphs	Graphs
Latvia	Low	No activity	Stable	0	None	0.0	0.0	919.2	Graphs	Graphs
Lithuania	Low	No activity	Decreasing	5	None	0.0	1.8	455.5	Graphs	Graphs
Luxembourg	Low	No activity	No information available	3	None	0.0	-*	-*	Graphs	Graphs
Malta				-	-	0.0	-	-		
Netherlands	Low	No activity	Stable	8	None	0.0	28.7	-	Graphs	Graphs
Norway	Low	Sporadic	Stable	9	None	22.2	32.7	-	Graphs	Graphs
Poland	Low	No activity	Decreasing	1	None	0.0	74.6	-	Graphs	Graphs
Portugal	Low	No activity	Stable	2	None	0.0	24.2	-	Graphs	Graphs
Romania	Low	No activity	Stable	12	-	0.0	1.5	675.3	Graphs	Graphs
Slovakia	Low	No activity	Increasing	-	-	0.0	131.9	1343.8	Graphs	Graphs
Slovenia	Low	No activity	Stable	1	None	0.0	0.0	818.8	Graphs	Graphs
Spain	Low	No activity	Increasing	69	None	1.4	17.0	-	Graphs	Graphs
Sweden	Low	Sporadic	Increasing	34	None	0.0	1.2	-	Graphs	Graphs
UK - England	Low	Sporadic	Stable	45	None	0.0	4.5	335.7	Graphs	Graphs
UK - Northern Ireland	Low	No activity	Stable	0	None	0.0	9.6	410.6	Graphs	Graphs
UK - Scotland	Low	Sporadic	Stable	17	A(H1N1)pdm09 & B	5.9	14.6	422.4	Graphs	Graphs
UK - Wales	Low	No activity	Stable	2	-	0.0	3.7	-	Graphs	Graphs
Europe				**386**		**3.4**				Graphs

**Incidence per 100 000 is not calculated for these countries as no population denominator is provided.*
Liechtenstein does not report to the European Influenza Surveillance Network.

Description of the system

Surveillance is based on nationally organised sentinel networks of physicians, mostly general practitioners (GPs), covering at least 1 to 5% of the population in their countries. All EU/EEA Member States (except Liechtenstein) participate. Depending on their country's choice, each sentinel physician reports the weekly number of patients seen with ILI, ARI, or both to a national focal point. From the national level, both numerator and denominator data are then reported to the European Surveillance System (TESSy) database. Additional semi-quantitative indicators of intensity, geographic spread, and trend of influenza activity at the national level are also reported.

Virological surveillance

Weekly analysis – virology

In week 45/2012, 21 countries tested 386 sentinel specimens, of which 13 (3.4%) were positive for influenza, which represents a slightly increase compared to previous week (0.7%),.The positive detections were reported by eight countries and the UK (Scotland): nine were type A and four were type B (Tables 1 and 2, Figure 1). Four sentinel influenza A viruses were subtyped as A(H3).

In week 45/2012, 65 non-sentinel source specimens, e.g. specimens collected for diagnostic purposes in hospitals, were positive for influenza virus: 39 were type A and 26 were type B. Of the 21 subtyped influenza A viruses, 18 (85.7%) were A(H1)pdm09 and three (14.3%) were A(H3). Five non-sentinel B viruses were of the Yamagata lineage (Table 2).

Of the 34 influenza viruses detected in sentinel specimens since week 40/2012, 23 (67.6%) were type A viruses and 11 (32.4%) were type B viruses. Of 15 type A viruses subtyped, 13 (86.7%) were A(H3) and two (13.3%) A(H1)pdm09.

Of the 232 influenza viruses detected from non-sentinel sources since week 40/2012, 157 (67.7%) were type A, and 75 (32.3%) were type B. Of 80 type A viruses subtyped, 49 (61.2%) were A(H1)pdm09 and 31 (38.8%) A(H3). The lineage of 17 type B viruses was Yamagata and one was Victoria (Table 2).

Of the five antigenic characterisations of influenza viruses reported for sentinel and non-sentinel specimens since week 40/2012, two were A(H3) A/Victoria/361/2011(H3N2)-like, one was A(H3) not attributed to any category, one was B/Wisconsin/1/2010-like (B/Yamagata/16/88-lineage) and one was B-Yamagata lineage not attributed to any category (Figure 2).

Of the nine genetic characterisations of influenza viruses reported for sentinel and non-sentinel specimens since week 40/2012, five were A(H3) clade representative A/Victoria/208/2009 (three falling within group 5 (representative A/Perth/10/2010) and two in group 3C (representative A/Victoria/361/2011)), one A(H1)pdm09 group 6 (representative A/St Petersburg/27/2011), one B-Yamagata lineage clade representative B/Wisconsin/1/2010 and two B-Yamagata lineage clade representative B/Estonia/55669/2011 (Figure 3).

More details on the antigenic and genetic characteristics of viruses circulating since 1 January 2012 can be found in the October report prepared by the Community Network of Reference Laboratories for Human Influenza in Europe (CNRL) coordination team.

Since week 40/2012, four viruses have been tested by the Netherlands and Sweden for antiviral drug susceptibility. The A(H1N1)pdm09 virus and the three A(H3N2) viruses tested were susceptible to neuraminidase inhibitors. All three A(H3N2) viruses screened for M2 blocker susceptibility were resistant.

In week 45/2012, 14 countries reported 568 respiratory syncytial virus detections (Figure 4).

Table 2. Weekly and cumulative influenza virus detections by type, subtype and surveillance system, weeks 40–45/2012

Virus type/subtype	Current period Sentinel	Current period Non-sentinel	Season Sentinel	Season Non-sentinel
Influenza A	9	39	23	157
A(H1)pdm09	0	18	2	49
A(H3)	4	3	13	31
A(sub-type unknown)	5	18	8	77
Influenza B	4	26	11	75
B(Vic) lineage	0	0	0	1
B(Yam) lineage	0	5	0	17
Unknown lineage	4	21	11	57
Total influenza	**13**	**65**	**34**	**232**

Note: A(H1)pdm09 and A(H3) include both N-subtyped and non-N-subtyped viruses

Figure 1. Proportion of sentinel specimens positive for influenza virus, weeks 40–45/2012

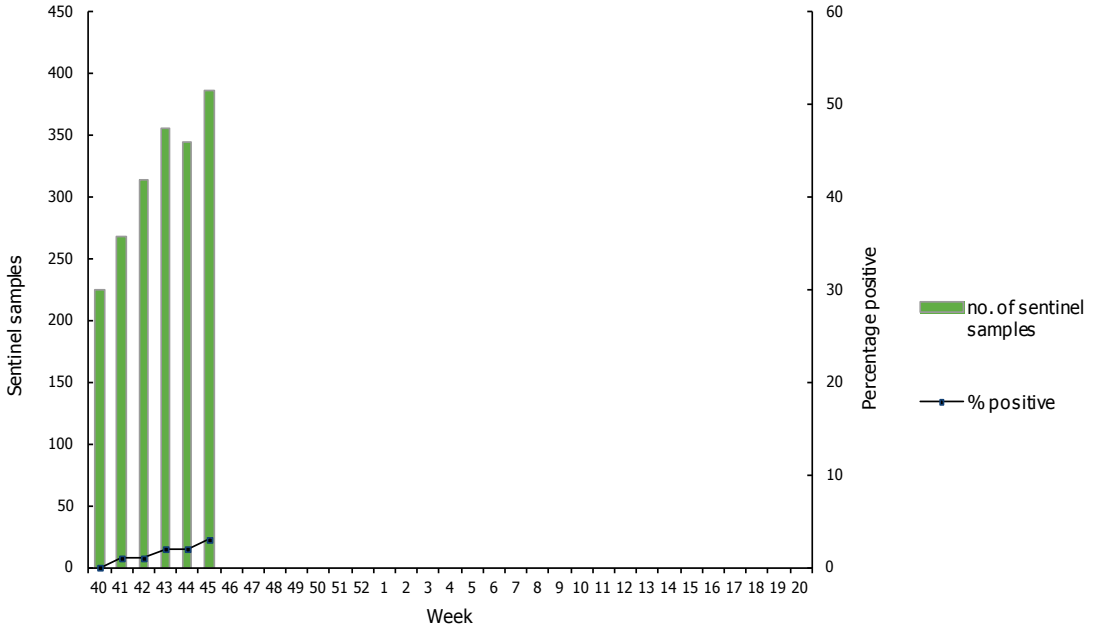


Figure 2. Results of antigenic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40–45/2012

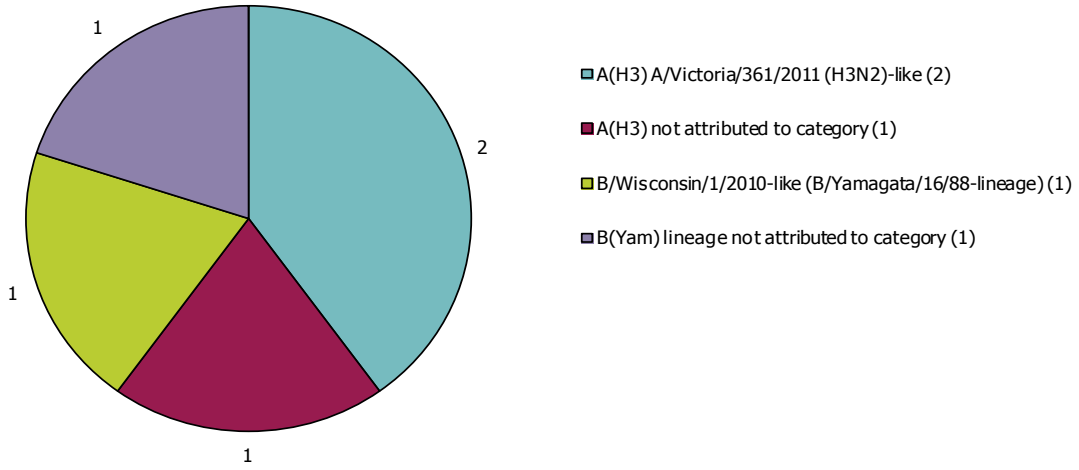


Figure 3. Results of genetic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40–45/2012

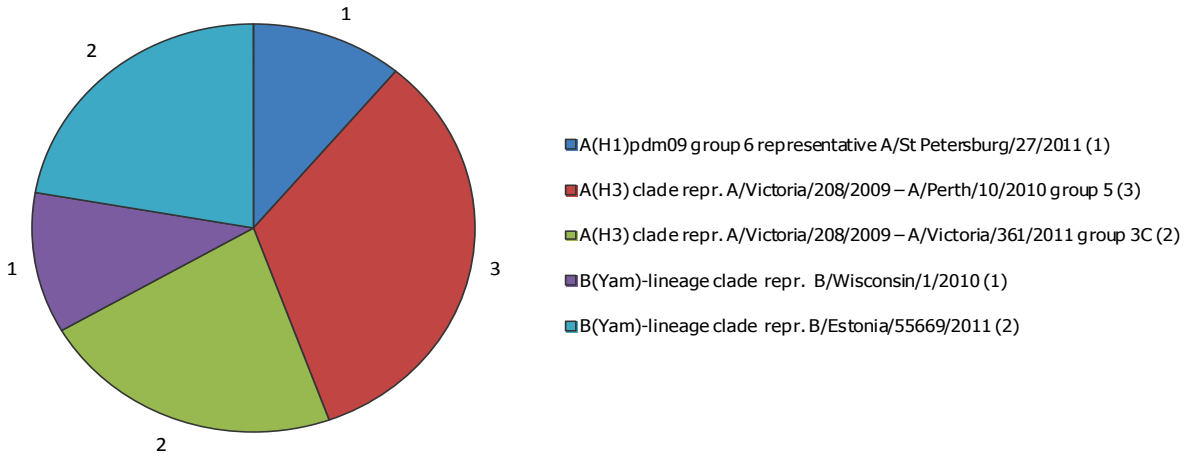
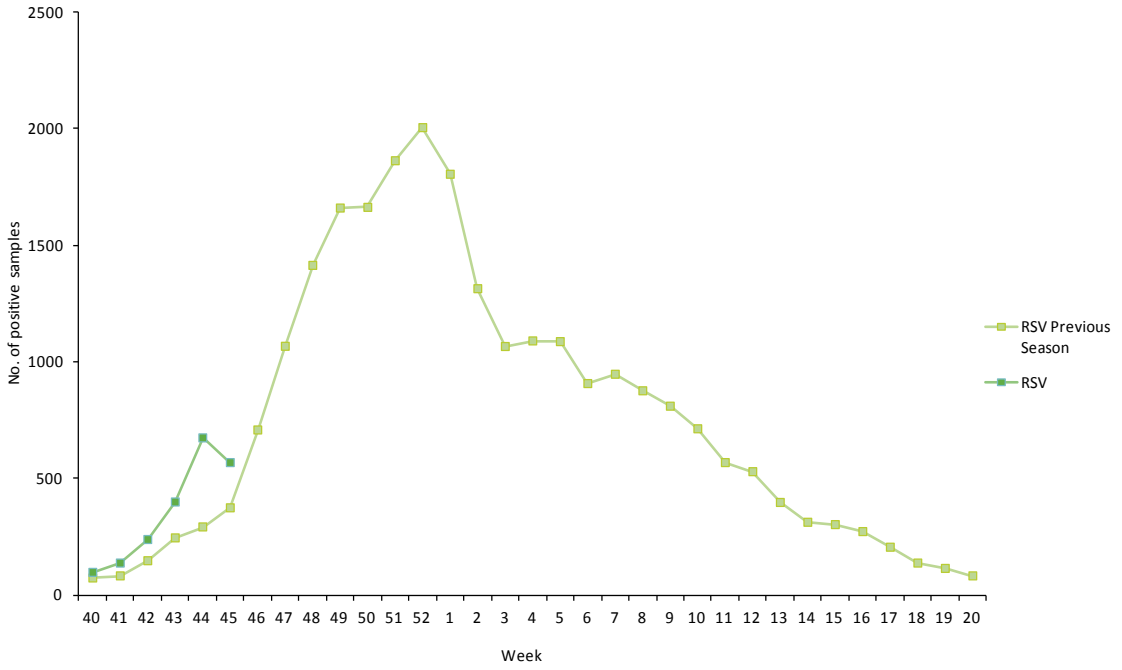


Figure 4. Respiratory syncytial virus (RSV) detections, sentinel and non-sentinel, weeks 40–45/2012



Country comments

Belgium: Four adults recently coming back from the Hajj in Saudi Arabia presented respiratory symptoms and were tested for respiratory viruses. Two tested positive for influenza B, one tested positive for influenza A and one was negative. Among the four persons was a couple with discordant results, the woman testing positive for influenza A and the man testing positive for influenza B. The other persons had no epidemiologic links. No other respiratory viruses, including coronavirus, have been detected.

Greece: During weeks 42 to 44, nineteen specimens from paediatric patients with upper respiratory infection in southern Greece were found negative for influenza viruses. The specimens were tested for other respiratory viruses using molecular methods and human rhinoviruses (n=2), human enteroviruses (n=2) and human respiratory syncytial virus type B (n=1) were detected.

Norway: There was a low but increasing number of influenza virus detections. A(H1)pdm09, A(H3) and B Yamagata lineage viruses appear to be circulating sporadically, in approximately equal numbers.

Description of the system

According to the nationally defined sampling strategy, sentinel physicians take nasal or pharyngeal swabs from patients with ILI, ARI or both and send the specimens to influenza-specific reference laboratories for virus detection, (sub-)typing, antigenic or genetic characterisation and antiviral susceptibility testing.

For details on the current virus strains recommended by WHO for vaccine preparation click here.

Hospital surveillance – severe influenza disease

Weekly analysis of hospitalised laboratory-confirmed influenza cases

Since week 40/2012, four hospitalised laboratory-confirmed influenza cases have been reported by Spain and Slovakia. One case involved an influenza B virus and of three type A viruses detected in the other patients, one was A(H1)pdm09, one A(H3) and one was not subtyped.

Table 3. Cumulative number of hospitalised laboratory-confirmed influenza cases, weeks 40–45/2012

Country	Number of cases	Incidence of cases per 100 000 population	Number of fatal cases reported	Incidence of fatal cases per 100 000 population	Estimated population covered
Slovakia	1	0.02			5435273
Spain	3				
Total	**4**		**0**		

Table 4. Number of hospitalised laboratory-confirmed influenza cases by influenza virus type and subtype, week 45/2012 and cumulative for the season

Pathogen	Number of cases during current week	Cumulative number of cases since the start of the season
Influenza A		3
A(H1)pdm09		1
A(H3)		1
A(sub-typing not performed)		1
Influenza B		1
Total		**4**

This report was written by an editorial team at the European Centre for Disease Prevention and Control (ECDC): Eeva Broberg, Flaviu Plata, Julien Beauté and René Snacken. The bulletin text was reviewed by the Community Network of Reference Laboratories for Human Influenza in Europe (CNRL) coordination team: Adam Meijer, Rod Daniels, John McCauley and Maria Zambon. On behalf of the EISN members, the bulletin text was reviewed by Amparo Larrauri Cámara (Instituto de Salud Carlos III, Spain), Vincent Enouf (Institut Pasteur, France) and Anne Mazick (Statens Serum Institut, Copenhagen). In addition, the report is reviewed by experts of WHO Regional Office for Europe.