

SURVEILLANCE REPORT

Weekly influenza surveillance overview

10 January 2014

Main surveillance developments in week 1/2014 (30 Dec 2013–5 Jan 2014)

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

For week 1/2014:

- Of the 29 reporting countries, 28 reported low-intensity influenza activity while Spain reported medium intensity.
- Of 305 sentinel specimens tested across 24 countries, 70 (23%) from 11 countries were positive for influenza virus.
- The viruses circulating this season remain well-matched with the 2013/14 seasonal vaccine viruses.
- Thirty-six hospitalised laboratory-confirmed influenza cases were reported by Ireland, Spain, Sweden and the UK.

Based on reports of widespread, local or sporadic spread from the majority of countries and the increasing proportion of specimens testing positive for influenza virus across 11 countries, which is indicative of influenza transmission, the season appears to be slowly getting started in EU/EEA countries.

Epidemiological surveillance: Of the 29 reporting countries, all except one reported low-intensity influenza activity. For more information, [click here](#).

Virological surveillance: Twenty-four countries collected and tested 305 sentinel specimens, of which 70 (23%) were positive for influenza viruses; 69 were type A. For more information, [click here](#).

Hospital surveillance of laboratory-confirmed influenza cases. Four countries reported 36 hospitalised patients with laboratory-confirmed influenza virus type A infection. For more information, [click here](#).

Epidemiological surveillance

Weekly and seasonal analysis

For week 1/2014, clinical data were reported by 29 countries. Spain reported medium intensity while all other countries experienced low-intensity influenza activity, which is the lowest category of reporting (Table 1, Map1).

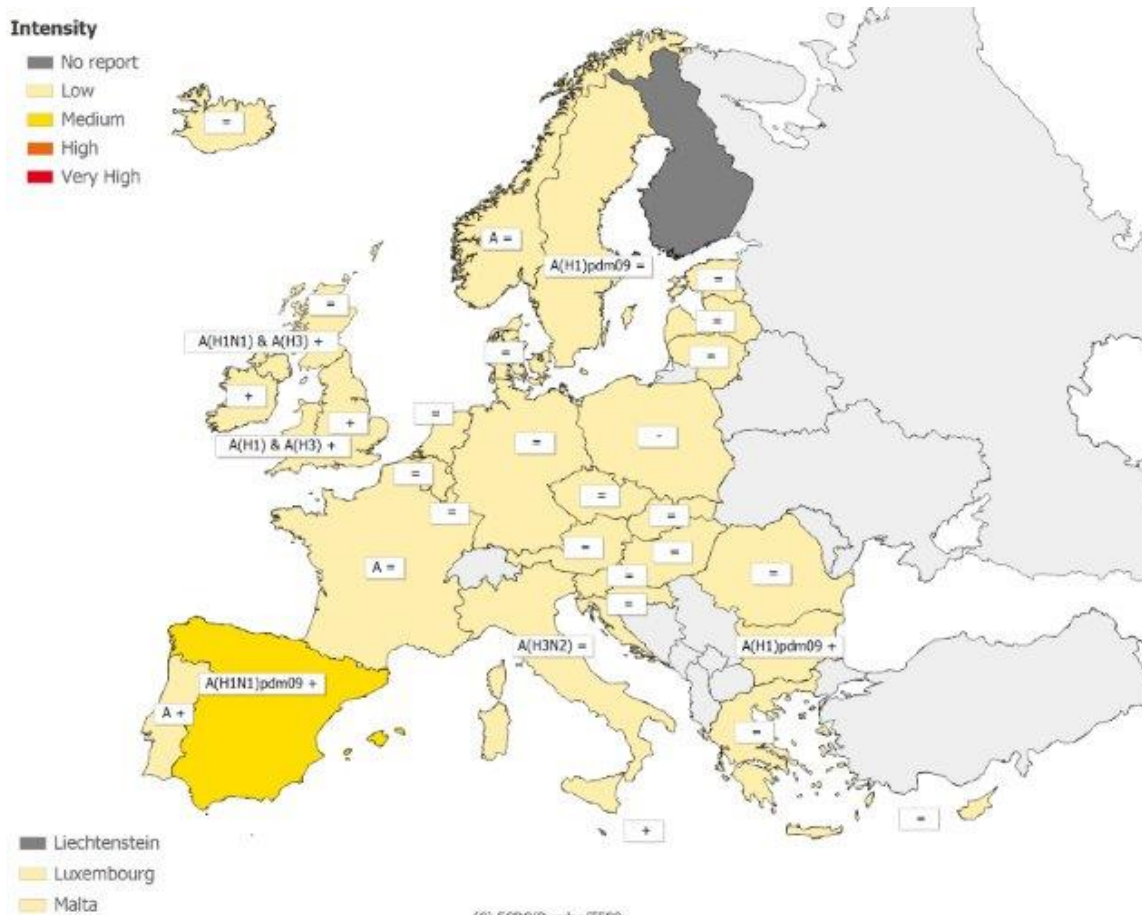
Geographic patterns of influenza activity were reported as widespread by Portugal and local by France, Spain, Sweden and the UK (England). Thirteen countries and the UK (Northern Ireland and Scotland) reported sporadic geographic spread. Eleven countries and the UK (Wales) reported no activity (Table 1, Map 2).

Increasing trends were reported by six countries (Bulgaria, Ireland, Malta, Portugal, Spain and the UK) while Poland reported a decreasing trend and all other countries had stable trends (Table 1, Map 2).

Among the 11 countries reporting influenza virus-positive sentinel specimens, a substantial increase in influenza-like illness rates were observed only in Spain.

The influenza season is slowly getting started in EU/EEA countries as approximately two thirds of countries reported local or sporadic spread for week 1/2014 and the proportion of specimens testing positive for influenza virus has increased for five consecutive weeks. The proportion of positive specimens has now plateaued, possibly due to reduced numbers of consultations during the New Year holiday period, and intensity remains low at the European level (Table 1, Map 1).

Map 1. Intensity for week 1/2014

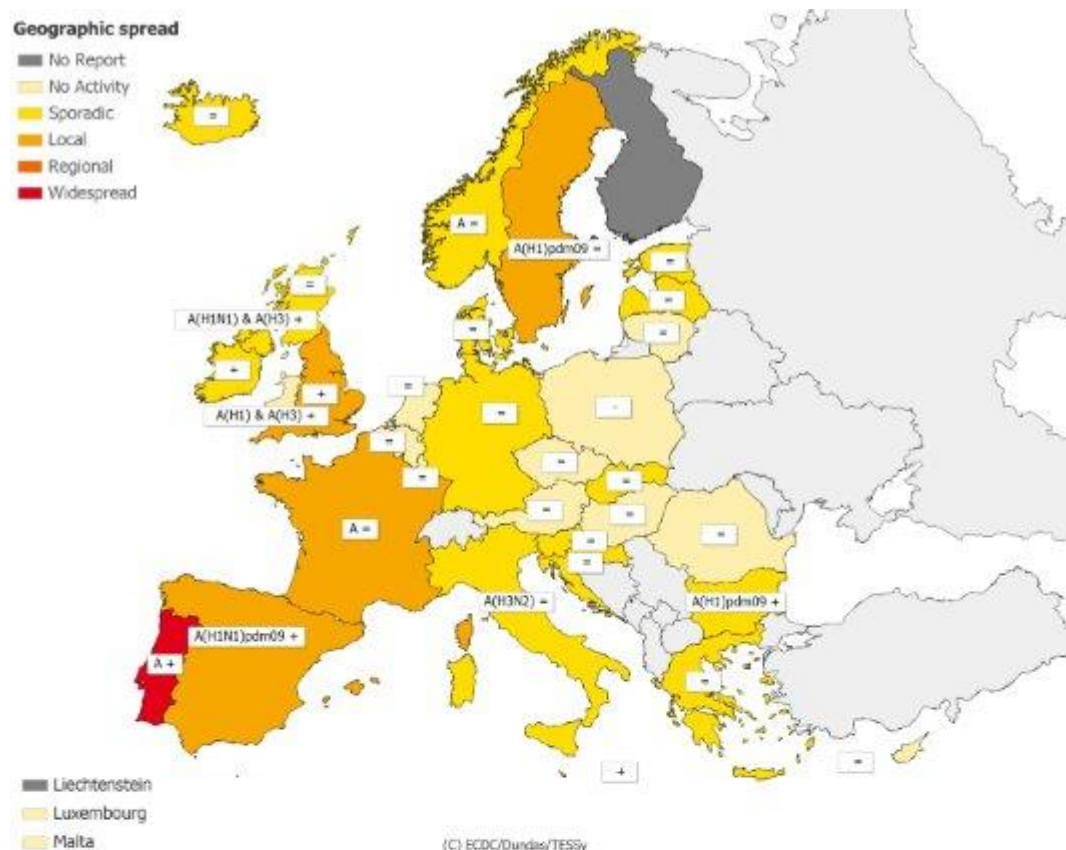


* A type/subtype is reported as dominant when at least ten samples have been detected as influenza positive in the country and of those > 40 % are positive for the type/subtype.

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	Type A
Very high	Particularly severe levels of influenza activity	A(H1) & A(H3)	Type A, Subtype H1 and H3
		A(H1)pdm09	Type A, Subtype (H1)pdm09
		A(H1N1) & A(H3)	Type A, Subtype H3 and H1N1
		A(H1N1)pdm09	Type A, Subtype (H1N1)pdm09
		A(H3N2)	Type A, Subtype H3N2

Map 2. Geographic spread for week 1/2014



* 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	+	Increasing clinical activity
No activity	No evidence of influenza virus activity (clinical activity remains at baseline levels)	-	Decreasing clinical activity
Sporadic	Isolated cases of laboratory confirmed influenza infection	=	Stable clinical activity
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)	A	Type A
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)	A(H1) & A(H3)	Type A, Subtype H1 and H3
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)	A(H1)pdm09	Type A, Subtype (H1)pdm09
		A(H1N1) & A(H3)	Type A, Subtype H3 and H1N1
		A	Type A, Subtype (H1N1)pdm09
		A(H3N2)	Type A, Subtype H3N2

Table 1. Epidemiological and virological overview by country, week 1/2014

Country	Intensity	Geographic spread	Trend	No. of sentinel specimens	Dominant type	Percentage positive	ILI per 100 000	ARI per 100 000	Epidemiological overview	Virological overview
Austria	Low	No activity	Stable	1	None	0.0	147.2	-	Graphs	Graphs
Belgium	Low	No activity	Stable	7	None	42.9	22.1	1179.1	Graphs	Graphs
Bulgaria	Low	Sporadic	Increasing	0	A(H1)pdm09	0.0	-	669.5	Graphs	Graphs
Croatia	Low	Sporadic	Stable	-	-	0.0	-	-	Graphs	Graphs
Cyprus	Low	No activity	Stable	-	-	0.0	.*	.*	Graphs	Graphs
Czech Republic	Low	No activity	Stable	2	None	0.0	17.7	566.0	Graphs	Graphs
Denmark	Low	Sporadic	Stable	5	None	20.0	28.6	-	Graphs	Graphs
Estonia	Low	Sporadic	Stable	4	None	0.0	4.4	201.2	Graphs	Graphs
Finland				3	None	0.0	-	-	Graphs	Graphs
France	Low	Local	Stable	26	A	19.2	-	1793.8	Graphs	Graphs
Germany	Low	Sporadic	Stable	22	None	4.5	-	698.2	Graphs	Graphs
Greece	Low	Sporadic	Stable	1	None	0.0	108.1	-	Graphs	Graphs
Hungary	Low	No activity	Stable	2	None	0.0	56.8	-	Graphs	Graphs
Iceland	Low	Sporadic	Stable	0	-	0.0	2.5	-	Graphs	Graphs
Ireland	Low	Sporadic	Increasing	7	None	42.9	11.2	-	Graphs	Graphs
Italy	Low	Sporadic	Stable	10	A(H3N2)	30.0	233.5	-	Graphs	Graphs
Latvia	Low	Sporadic	Stable	0	None	0.0	0.0	373.3	Graphs	Graphs
Lithuania	Low	No activity	Stable	1	None	0.0	0.5	325.6	Graphs	Graphs
Luxembourg	Low	No activity	Stable	2	-	0.0	.*	.*	Graphs	Graphs
Malta	Low	No activity	Increasing	3	None	0.0	.*	.*	Graphs	Graphs
Netherlands	Low	No activity	Stable	2	None	0.0	21.7	-	Graphs	Graphs
Norway	Low	Sporadic	Stable	4	A	0.0	19.9	-	Graphs	Graphs
Poland	Low	No activity	Decreasing	7	None	0.0	130.8	-	Graphs	Graphs
Portugal	Low	Widespread	Increasing	8	A	75.0	43.6	-	Graphs	Graphs
Romania	Low	No activity	Stable	1	-	0.0	0.5	327.1	Graphs	Graphs
Slovakia	Low	Sporadic	Stable	0	None	0.0	68.6	883.7	Graphs	Graphs
Slovenia	Low	Sporadic	Stable	7	None	28.6	0.0	860.8	Graphs	Graphs
Spain	Medium	Local	Increasing	92	A(H1N1)pdm09	44.6	91.9	-	Graphs	Graphs
Sweden	Low	Local	Stable	15	A(H1)pdm09	20	1.7	-	Graphs	Graphs
UK - England	Low	Local	Increasing	67	None	3.0	7.3	292.2	Graphs	Graphs
UK - Northern Ireland	Low	Sporadic	Increasing	4	A(H1N1) & A(H3)	0.0	22.8	495.9	Graphs	Graphs
UK - Scotland	Low	Sporadic	Stable	2	None	0.0	9.9	657.1	Graphs	Graphs
UK - Wales	Low	No activity	Increasing	0	A(H1) & A(H3)	0.0	7.0	-	Graphs	Graphs
Europe				305		23.0				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.

Country comments

Sweden: The epidemic in Sweden is thus far concentrated in northern Sweden.

UK (Scotland): Please note that the GP consultation rates for ILI and ARI were adjusted to account for the reduced number of working days in week 01. The data for this week must therefore be interpreted with caution.

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, which might include also non-sentinel sources of information.

Virological surveillance

Weekly and seasonal analysis

For week 1/2014, 24 countries tested 305 sentinel specimens, of which 70 (23%; range 0-75%) from eleven countries were positive for influenza virus. Sixty-nine were type A viruses and one was B. Of the 59 influenza A viruses subtyped, 30 (51%) were A(H1)pdm09 and 29 (49%) were A(H3) (Tables 1–2, Figures 1–2). The proportion of specimens testing positive for influenza virus has increased since week 47/2014 for five consecutive weeks (Figure 1).

Since week 40/2013, of the 390 sentinel specimens positive for influenza virus, 362 (93%) were type A and 28 (7%) were type B. Of the 291 influenza A viruses subtyped, 149 (51%) were A(H1)pdm09 and 142 (49%) were A(H3). This differs from the distribution seen in North America where more than 90% of influenza A viruses are A(H1N1)pdm09 (see [FluWatch](#) and [FluView](#)).

Non-sentinel virus detections are summarised in Table 2.

The results of antigenic and genetic characterisation of sentinel and non-sentinel viruses are displayed in Tables 3 and 4.

Since week 40/2013, none of the 43 antigenically characterised viruses have differed substantially from the [current vaccine strains recommended by WHO](#) (Table 3).

More details on viruses circulating since September 2013 can be found in the [December virus characterisation report](#).

Since week 40/2013, 45 A(H1)pdm09, 28 A(H3) viruses and six B viruses have been tested for susceptibility to the neuraminidase inhibitors oseltamivir and zanamivir; none showed genetic or phenotypic (IC₅₀) evidence for reduced inhibition.

For week 1/2014, 13 countries reported 2 029 respiratory syncytial virus (RSV) detections. The number of RSV detections appears to have reached its peak for this season in week 52/2013. The number of RSV detections has been comparable to the number of RSV detections observed during the same period last year (Figure 3).

Table 2. Weekly and cumulative influenza virus detections by type, subtype and surveillance system, weeks 40/2013–1/2014

Virus type/subtype	Current period Sentinel	Current period Non-sentinel	Season Sentinel	Season Non-sentinel
Influenza A	69	371	362	1286
A(H1)pdm09	30	129	149	500
A(H3)	29	38	142	168
A(sub-type unknown)	10	204	71	618
Influenza B	1	16	28	138
B(Vic) lineage	0	0	2	1
B(Yam) lineage	1	0	6	16
Unknown lineage	0	16	20	121
Total influenza	70	387	390	1424

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 40/2013–1/2014

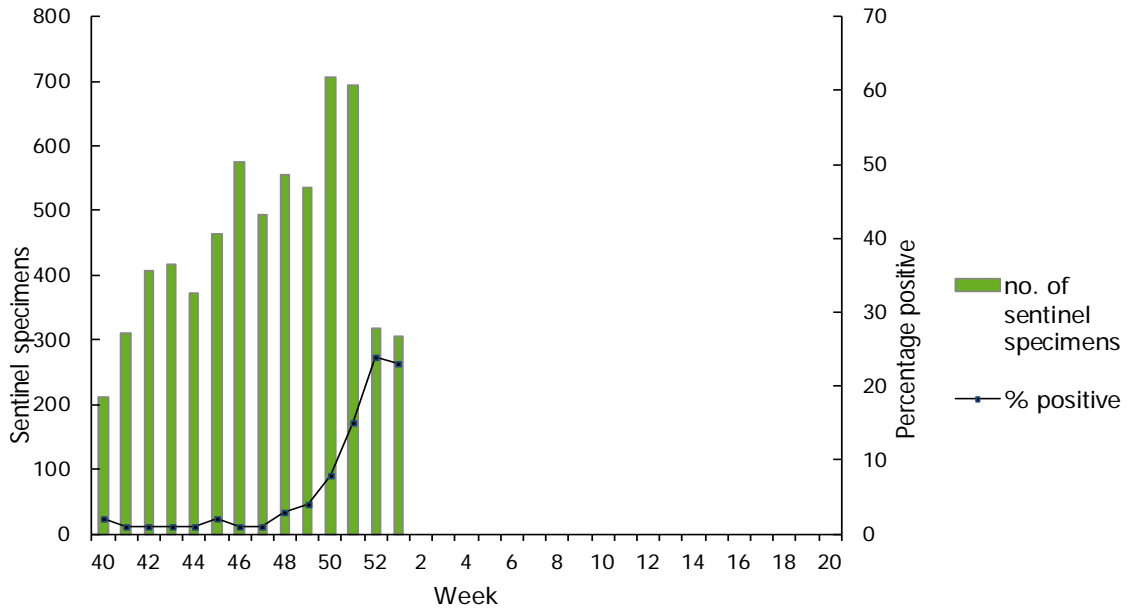


Figure 2. Number of sentinel specimens positive for influenza virus, by type, subtype and by week of report, weeks 40/2013–1/2014

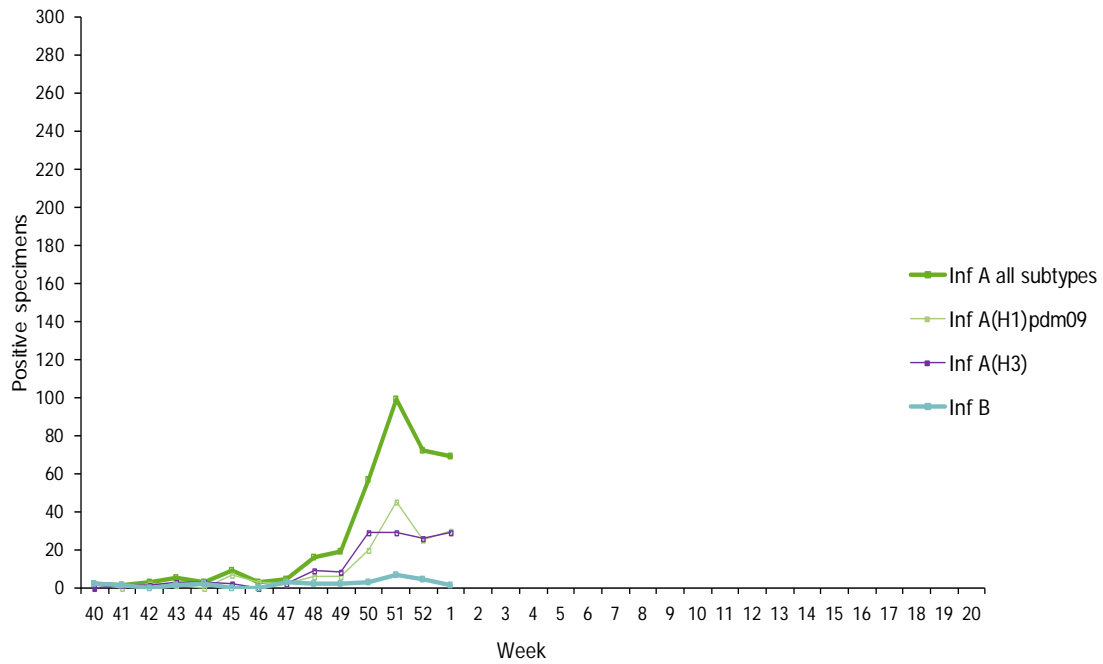
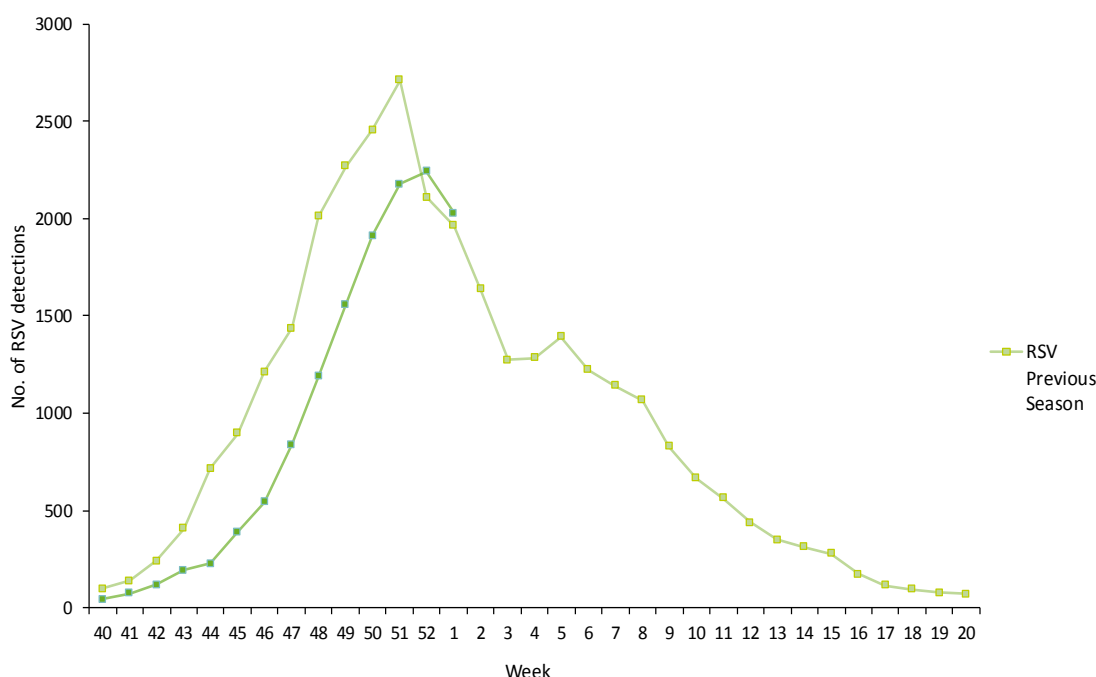


Table 3. Results of antigenic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40/2013–1/2014

Antigenic group	Number of viruses
A(H1)pdm09 A/California/7/2009 (H1N1)-like	16
A(H3) A/Texas/50/2012 (H3N2)-like	23
B/Brisbane/60/2008-like (B/Victoria/2/87 lineage)	1
B/Massachusetts/02/2012-like (B/Yamagata/16/88-lineage)	2
B/Wisconsin/1/2010-like (B/Yamagata/16/88-lineage)	1

Table 4. Results of genetic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40/2013–1/2014

Phylogenetic group	Number of viruses
A(H1)pdm09 clade repr. A/California/7/2009 - A/St Petersburg/27/2011 group (6)	33
A(H3) clade representative A/Perth/16/2009 – A/Texas/50/2012 subgroup(3C)	29
B(Vic)-lineage clade 1A representative B/Brisbane/60/2008	1
B(Yam)-lineage - clade 2 representative B/Massachusetts/02/2012	5
B(Yam)-lineage clade 3 representative B/Wisconsin/1/2010	3

Figure 3. Respiratory syncytial virus (RSV) detections, sentinel and non-sentinel, weeks 40/2013–1/2014

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. The non-sentinel part of the surveillance system comprises viruses submitted from hospital and peripheral diagnostic laboratories to the influenza-specific reference laboratories for (sub)typing, antigenic or genetic characterisation and antiviral susceptibility testing.

For details of 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 40/2013, five countries have reported 173 hospitalised laboratory-confirmed influenza cases. Three of these, all of which were patients ≥ 80 years of age, had a fatal outcome (Table 5).

For week 1/2014, 36 hospitalised laboratory-confirmed influenza cases were reported by four countries (Ireland, Spain, Sweden and the UK) (Table 6). Of these, 21 were related to A(H1)pdm09, two to A(H3) and 13 to non-subtyped influenza A viruses.

Of the 173 hospitalised laboratory-confirmed influenza cases reported since week 40/2013, 160 (92%) were related to influenza type A and 13 (8%) to type B. Of 90 subtyped influenza A viruses, 75 (83%) were A(H1)pdm09 and 15 (17%) were A(H3) viruses (Table 6).

Table 5. Cumulative number of hospitalised laboratory-confirmed influenza cases, weeks 40/2013–1/2014

Country	Number of cases	Incidence of cases per 100 000	Number of fatal cases reported	Estimated population covered
France	15		1	
Ireland	4			
Spain	70		2	
Sweden	4			
United Kingdom	80	0.13		63 705 030
Total	173		3	

Table 6. Number of hospitalised laboratory-confirmed influenza cases by influenza type and subtype, reported for week 1/2014 and cumulative for the season

Pathogen	Number of cases for current week	Cumulative number of cases since week 40/2013
Influenza A	36	160
A(H1)pdm09	21	75
A(H3)	2	15
A(sub-typing not performed)	13	70
Influenza B	0	13
Total	36	173

The EuroMOMO mortality monitoring system

Week 1: All-cause mortality has been within the normal range for all reporting countries. Further details are available on <http://www.euromomo.eu/>

This report was written by an editorial team at the European Centre for Disease Prevention and Control (ECDC): Cornelia Adlhoch, Eeva Broberg, Julien Beauté and René Snacken. The bulletin text was reviewed by European Reference Laboratory Network for Human Influenza (ERLI-Net) coordination team: Adam Meijer, Rod Daniels, John McCauley and Maria Zambon. On behalf of the EISN members, the bulletin text was reviewed by Maja Sočan (Inštitut za varovanje zdravja), Allison Waters (University College Dublin) and Tyra Grove Krause (Statens Serum Institut, Copenhagen). In addition, the report is reviewed by experts of WHO Regional Office for Europe.

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All data published in the WISO are up-to-date on the day of publication. Past this date, however, published data should not be used for longitudinal comparisons as countries tend to retrospectively update their database.

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