

SURVEILLANCE REPORT



Weekly influenza surveillance overview

6 December 2013

Main surveillance developments in week 48/2013 (25 Nov–1 Dec)

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 48/2013:

- All 29 reporting countries recorded low intensity influenza activity.
- Of 393 sentinel specimens tested across 24 countries, 3% were positive for influenza A virus.
- Three hospitalised laboratory-confirmed influenza A cases were reported by the UK.

Since the start of the 2013–2014 influenza surveillance period, week 40/2013, there has been no evidence of sustained influenza activity in Europe. The percentage of sentinel specimens testing positive for influenza is increasing in some countries, possibly indicating the start of the epidemic period in those countries.

Sentinel surveillance of influenza-like illness (ILI)/ acute respiratory infection (ARI): Low intensity was recorded by all 29 reporting countries. For more information, [click here](#).

Virological surveillance: Twenty-four countries collected and tested 393 sentinel specimens, of which 12 (3%) were positive for influenza A virus. For more information, [click here](#).

Hospital surveillance of laboratory-confirmed influenza cases. The UK reported three hospitalised patients with laboratory-confirmed influenza A infection. For more information, [click here](#).

Sentinel surveillance (ILI/ARI)

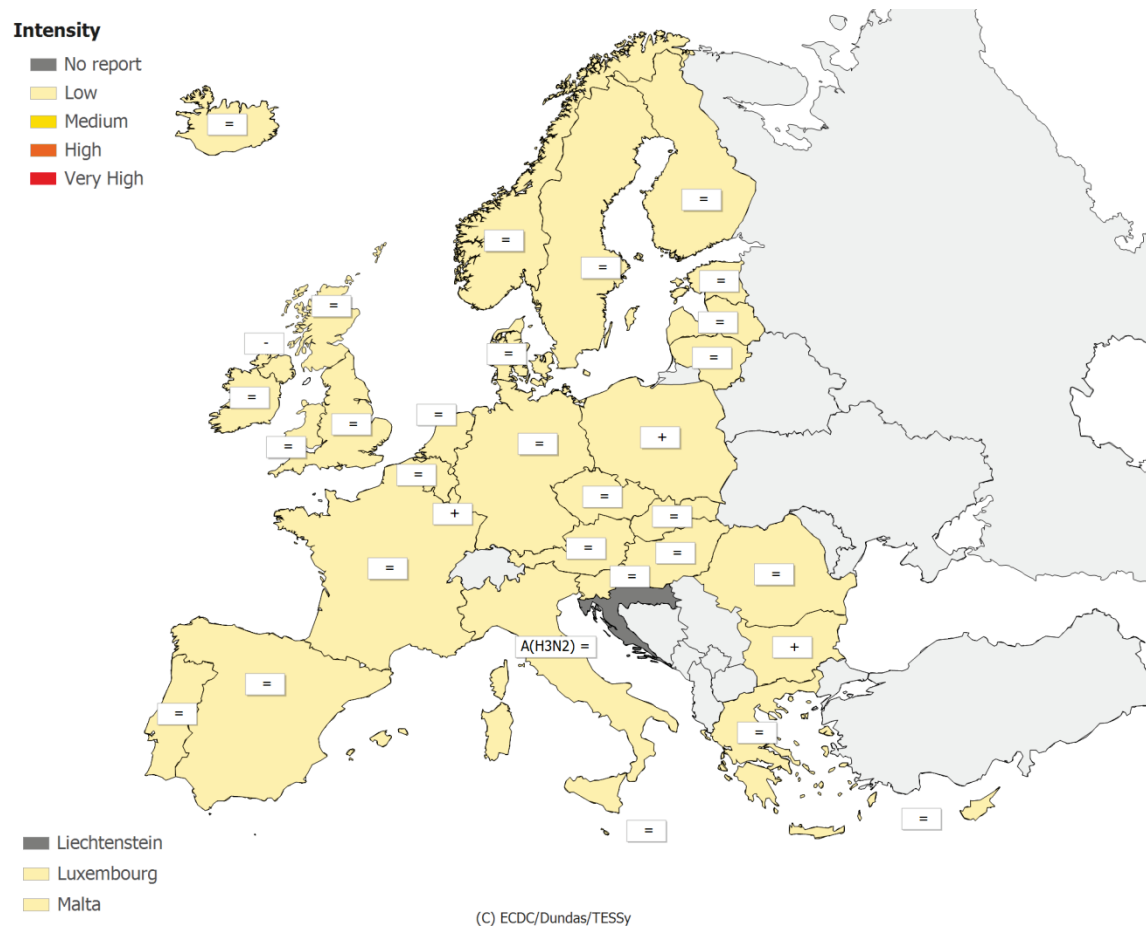
Weekly analysis – epidemiology

For week 48/2013, clinical data were reported by 29 countries, all of which experienced low-intensity influenza activity, the lowest category of reporting (Table 1, Map1).

Geographic patterns of influenza activity were reported as sporadic by Denmark, France, Germany, Norway, Slovakia, Spain, Sweden and the UK (Scotland). All other countries reported no activity (Table 1, Map 2).

Increasing trends were reported by Bulgaria, Luxembourg, Poland and decreasing trends by the UK (Northern Ireland). All other countries reported stable trends (Table 1, Map 2). The incidence of ILI/ARI was below the epidemic thresholds in all countries.

Map 1. Intensity for week 48/2013



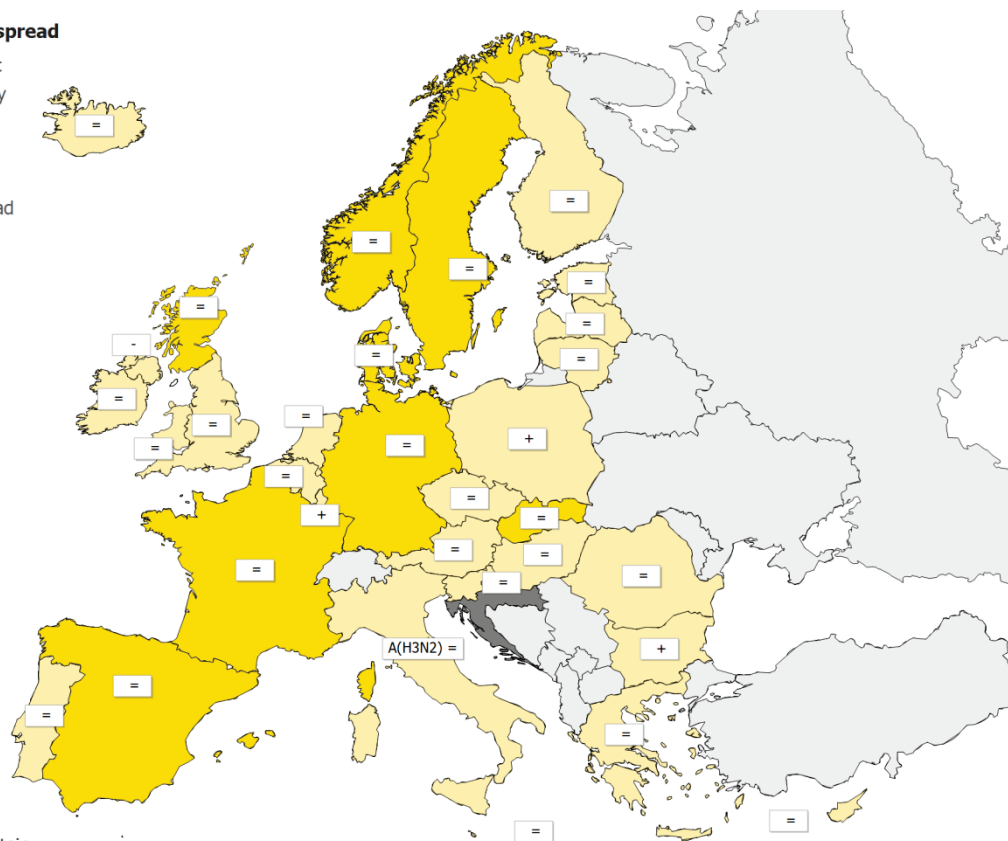
* A type/subtype is reported as dominant when at least ten samples have been detected as influenza positive in the country and of those > 40 % are positive for the type/subtype.
Legend:

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(H3N2)	Type A, Subtype H3N2
Very high	Particularly severe levels of influenza activity		

Map 2. Geographic spread for week 48/2013

Geographic spread

- No Report
- No Activity
- Sporadic
- Local
- Regional
- Widespread



- Liechtenstein
- Luxembourg
- Malta

(C) ECDC/Dundas/TESSy

* 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(H3N2)	Type A, Subtype H3N2
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)		

Table 1. Epidemiological and virological overview by country, week 48/2013

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	5	None	0.0	817.8	-	Graphs	Graphs
Belgium	Low	No activity	Stable	12	None	0.0	40.4	1893.4	Graphs	Graphs
Bulgaria	Low	No activity	Increasing	0	None	0.0	-	1055.5	Graphs	Graphs
Croatia				-	-	0.0	-	-		
Cyprus	Low	No activity	Stable	-	-	0.0	-*	-*	Graphs	Graphs
Czech Republic	Low	No activity	Stable	-	-	0.0	26.2	890.9	Graphs	Graphs
Denmark	Low	Sporadic	Stable	4	None	0.0	32.2	-	Graphs	Graphs
Estonia	Low	No activity	Stable	4	None	0.0	7.7	287.6	Graphs	Graphs
Finland	Low	No activity	Stable	8	None	0.0	-	-	Graphs	Graphs
France	Low	Sporadic	Stable	55	None	1.8	-	1686.3	Graphs	Graphs
Germany	Low	Sporadic	Stable	-	None	0.0	-	1056.2	Graphs	Graphs
Greece	Low	No activity	Stable	1	None	0.0	56.4	-	Graphs	Graphs
Hungary	Low	No activity	Stable	18	None	0.0	72.2	-	Graphs	Graphs
Iceland	Low	No activity	Stable	0	-	0.0	2.5	-	Graphs	Graphs
Ireland	Low	No activity	Stable	9	None	0.0	8.4	-	Graphs	Graphs
Italy	Low	No activity	Stable	13	A(H3N2)	7.7	117.9	-	Graphs	Graphs
Latvia	Low	No activity	Stable	0	None	0.0	0.0	893.9	Graphs	Graphs
Lithuania	Low	No activity	Stable	9	None	0.0	0.6	539.1	Graphs	Graphs
Luxembourg	Low	No activity	Increasing	3	-	0.0	-*	-*	Graphs	Graphs
Malta	Low	No activity	Stable	-	-	0.0	-*	-*	Graphs	Graphs
Netherlands	Low	No activity	Stable	4	None	0.0	32.3	-	Graphs	Graphs
Norway	Low	Sporadic	Stable	8	None	12.5	24.1	-	Graphs	Graphs
Poland	Low	No activity	Increasing	16	None	0.0	203.5	-	Graphs	Graphs
Portugal	Low	No activity	Stable	2	None	0.0	0.0	-	Graphs	Graphs
Romania	Low	No activity	Stable	7	-	0.0	1.2	679.0	Graphs	Graphs
Slovakia	Low	Sporadic	Stable	1	None	0.0	160.5	1605.4	Graphs	Graphs
Slovenia	Low	No activity	Stable	8	None	0.0	0.0	928.8	Graphs	Graphs
Spain	Low	Sporadic	Stable	79	None	7.6	16.8	-	Graphs	Graphs
Sweden	Low	Sporadic	Stable	35	None	5.7	2.8	-	Graphs	Graphs
UK - England	Low	No activity	Stable	71	None	0.0	5.2	233.5	Graphs	Graphs
UK - Northern Ireland	Low	No activity	Decreasing	0	None	0.0	18.8	385.1	Graphs	Graphs
UK - Scotland	Low	Sporadic	Stable	21	None	4.8	8.7	401.7	Graphs	Graphs
UK - Wales	Low	No activity	Stable	-	-	0.0	4.9	-	Graphs	Graphs
Europe				393			3.1		Graphs	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

For week 48/2013, 24 countries tested a total of 393 sentinel specimens, of which 12 (3%) were positive for influenza A virus in France, Norway, Spain, Sweden and the UK (Scotland) (Tables 1–2).

Since week 40/2013, of 51 sentinel specimens positive for influenza virus, 41 (80%) were type A and 10 (20%) were type B. Of 35 sub-typed influenza viruses, 20 (57%) were A(H1)pdm09 and 15 (43%) were A(H3).

In addition, since week 40/2013, 305 non-sentinel source specimens (e.g. specimens collected for diagnostic purposes in hospitals) were found to be positive for influenza virus, 239 were type A and 66 were type B viruses. Sixty-six (59%) subtyped influenza A viruses were A(H1)pdm09 and 45 (41%) were A(H3). Of eight B viruses ascribed to lineage, all were B-Yamagata lineage (Table 2).

Of the 21 antigenic characterisations of influenza A viruses reported since week 40/2013, 13 have been characterised as A(H3) A/Texas/50/2012 (H3N2)-like and nine as A(H1)pdm09 A/California/7/2009 (H1N1)-like. Of three B viruses, two were B/Massachusetts/02/2012-like (B/Yamagata/16/88-lineage) and one B/Wisconsin/1/2010-like (B/Yamagata/16/88-lineage) (Table 3).

Since week 40/2013, 30 genetic characterisations of influenza viruses have been reported. Of these, 15 clustered with A(H1)pdm09 genetic group, six represented by A/St Petersburg/27/2011 and 13 were characterised as A(H3) clade representative A/Perth/16/2009 – A/Texas/50/2012 falling within genetic group 3C. Two B-Yamagata lineage clade viruses were represented by B/Massachusetts/02/2012 (Table 4). For details of the current virus strains recommended by WHO for vaccine preparation [click here](#).

More details on viruses that circulated between 1 January and 31 May 2013 can be found in the [September report](#) prepared by the European Reference Laboratory Network for Human Influenza (ERLI-Net) coordination team.

Since week 40/2013, 21 A(H1N1)pdm09 viruses, 12 A(H3N2) and two influenza B viruses have been tested for susceptibility to neuraminidase inhibitors (NIs) by genetic and/or phenotypic methods, and reported on by Norway, Spain, Sweden and the UK. None of the test results showed evidence for reduced or highly reduced inhibition by NIs. Twelve A(H1N1)pdm09 and eight A(H3N2) viruses carried the S31N amino acid substitution in M2 conferring resistance to adamantane M2 ion-channel inhibitors.

For week 48/2013, 11 countries reported 877 respiratory syncytial virus (RSV) detections. RSV detections continued to increase for the third consecutive week but are still at low levels compared to the same time last year (Figure 3).

Table 2. Weekly and cumulative influenza virus detections by type, subtype and surveillance system, week 40–48/2013

Virus type/subtype	Current period Sentinel	Current period Non-sentinel	Season Sentinel	Season Non-sentinel
Influenza A	11	28	41	239
A(H1)pdm09	4	6	20	66
A(H3)	4	1	15	45
A(sub-type unknown)	3	21	6	128
Influenza B	1	15	10	66
B(Vic) lineage	0	0	0	0
B(Yam) lineage	0	0	0	8
Unknown lineage	1	15	10	58
Total influenza	12	43	51	305

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 40–48/2013

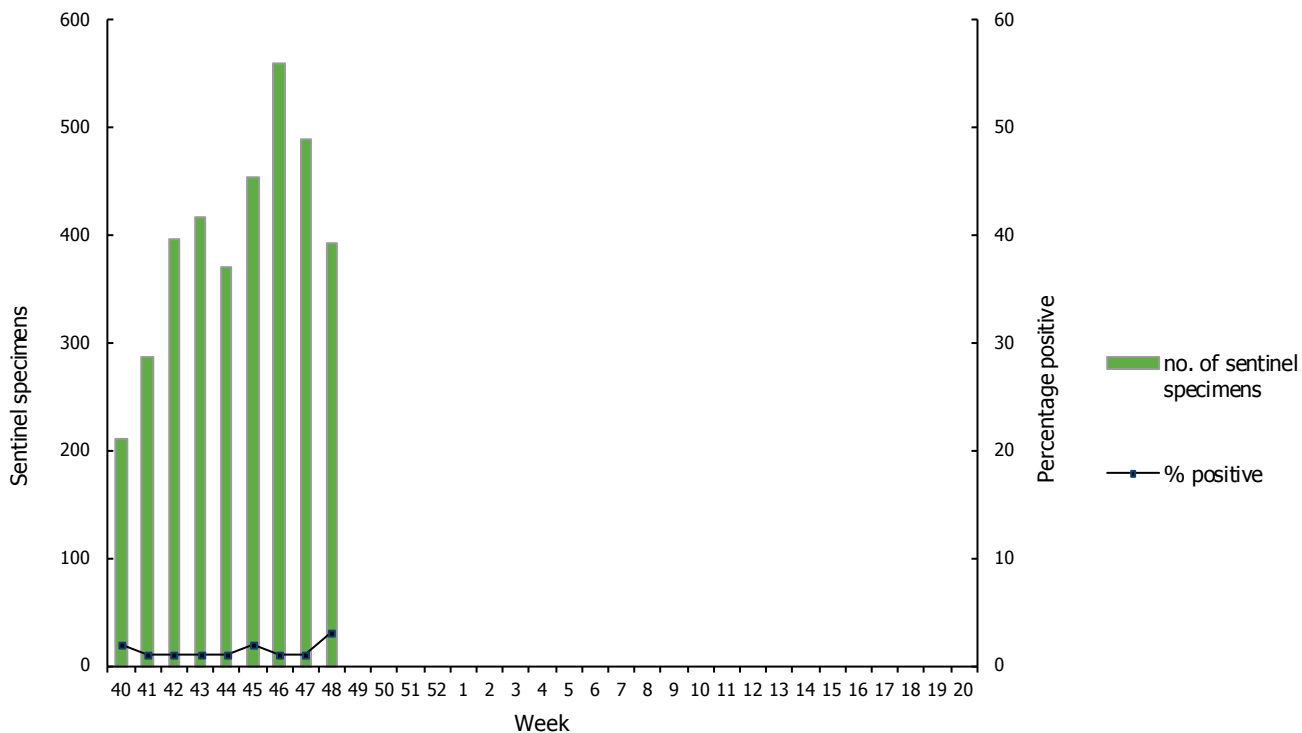


Figure 2. Number of sentinel specimens positive for influenza virus, by type, subtype and by week of report, weeks 40–48/2013

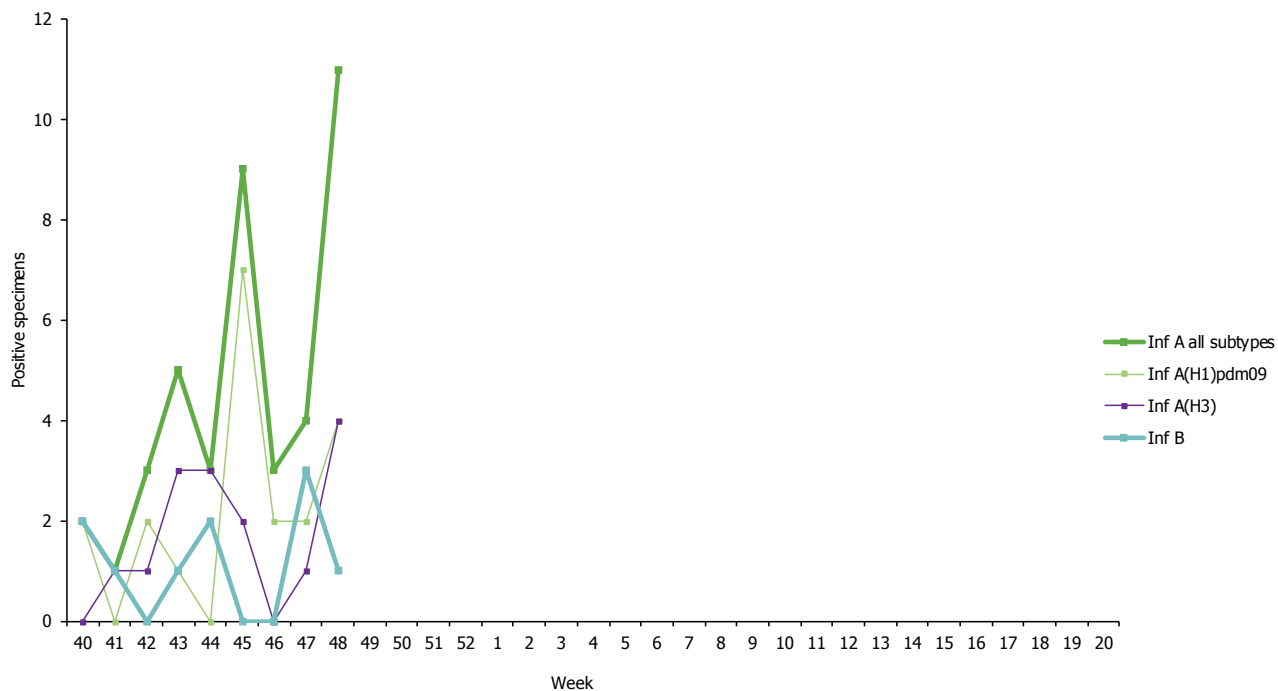


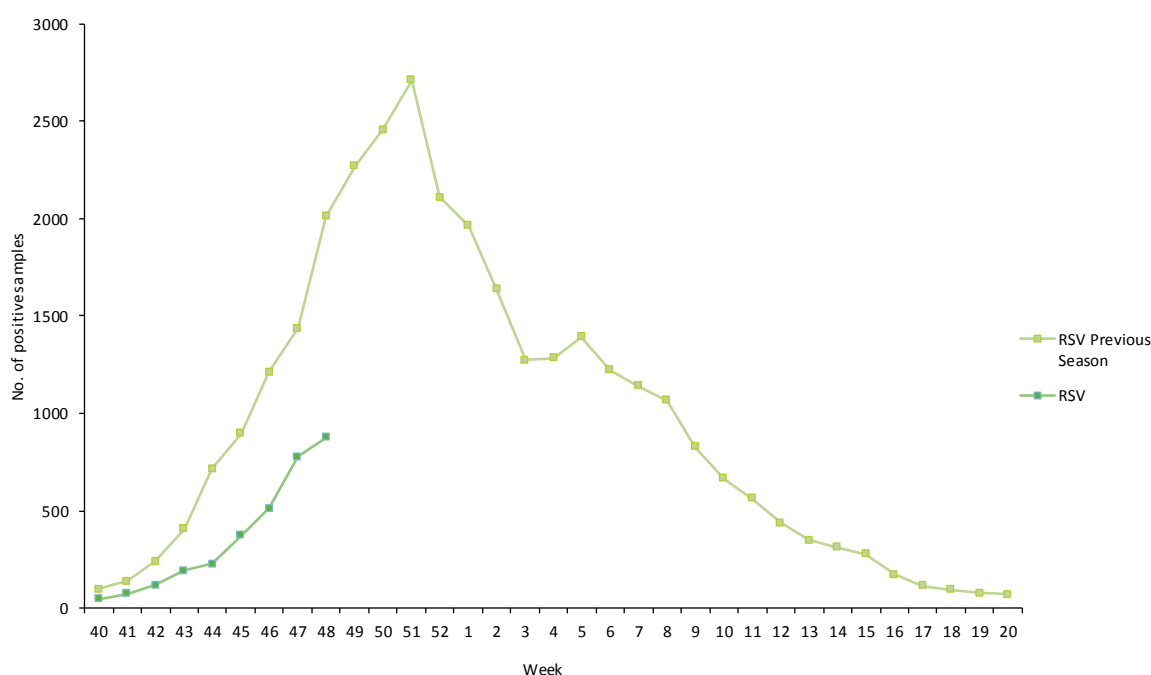
Table 3. Results of antigenic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40–48/2013

Antigenic group	Number of viruses
A(H1)pdm09 A/California/7/2009 (H1N1)-like	9
A(H3) A/Texas/50/2012 (H3N2)-like	13
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 40–48/2013

Phylogenetic group	Number of viruses
A(H1)pdm09 group 6 representative A/St Petersburg/27/2011	15
A(H3) clade repr. A/Perth/16/2009 – A/Texas/50/2012 subgroup (3C)	13
B(Yam)-lineage clade 2 representative B/Massachusetts/02/2012	2

Figure 3. Respiratory syncytial virus (RSV) detections, sentinel and non-sentinel, weeks 40–48/2013



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 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, three countries have reported 19 hospitalised laboratory-confirmed influenza cases (Table 5).

Of the 19 cases reported since week 40/2013, 11 were related to infection with influenza virus type A and eight to infection with influenza virus type B (Table 6).

Table 5. Cumulative number of hospitalised laboratory-confirmed influenza cases, weeks 40-48/2013

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
Ireland	1				
Sweden	1				
United Kingdom	17	0.03			63705030
Total	19		0		

Table 6. Number of hospitalised laboratory-confirmed influenza cases by influenza type and subtype, week 48/2013 and cumulative for the season

Pathogen	Number of cases during current week	Cumulative number of cases since the start of the season
Influenza A	2	11
A(H1)pdm09		4
A(H3)		
A(sub-typing not performed)	2	7
Influenza B	1	8
Total	3	19

The EuroMOMO mortality monitoring system

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.

Maps and commentary published in this Weekly Influenza Surveillance Overview (WISO) do not represent a statement on the part of ECDC or its partners on the legal or border status of the countries and territories shown.

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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