

SURVEILLANCE REPORT

Weekly influenza surveillance overview

27 December 2013

Main surveillance developments in week 51/2013 (16–22 December 2013)

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

In week 51/2013:

- All 13 reporting countries recorded low-intensity influenza activity.
- Of 111 sentinel specimens tested across 15 countries, five (5%) were positive for influenza viruses.

Since the start of the 2013-2014 influenza surveillance in week 40/2013, there has been no evidence of sustained influenza activity in Europe. Due to the low level of reporting during the Christmas holidays, a comprehensive report on influenza activity in Europe cannot be provided.

Sentinel surveillance of influenza-like illness (ILI)/ acute respiratory infection (ARI): All 13 reporting countries recorded low-intensity influenza activity. For more information, [click here](#).

Virological surveillance: Sixteen countries collected and tested 111 sentinel specimens, five (5%) of which were positive for influenza viruses. For more information, [click here](#).

Hospital surveillance of laboratory-confirmed influenza cases. Since week 40/2013, five countries have reported 40 hospitalised laboratory-confirmed influenza cases, including one fatal case. For more information, [click here](#).

Sentinel surveillance (ILI/ARI)

Weekly analysis – epidemiology

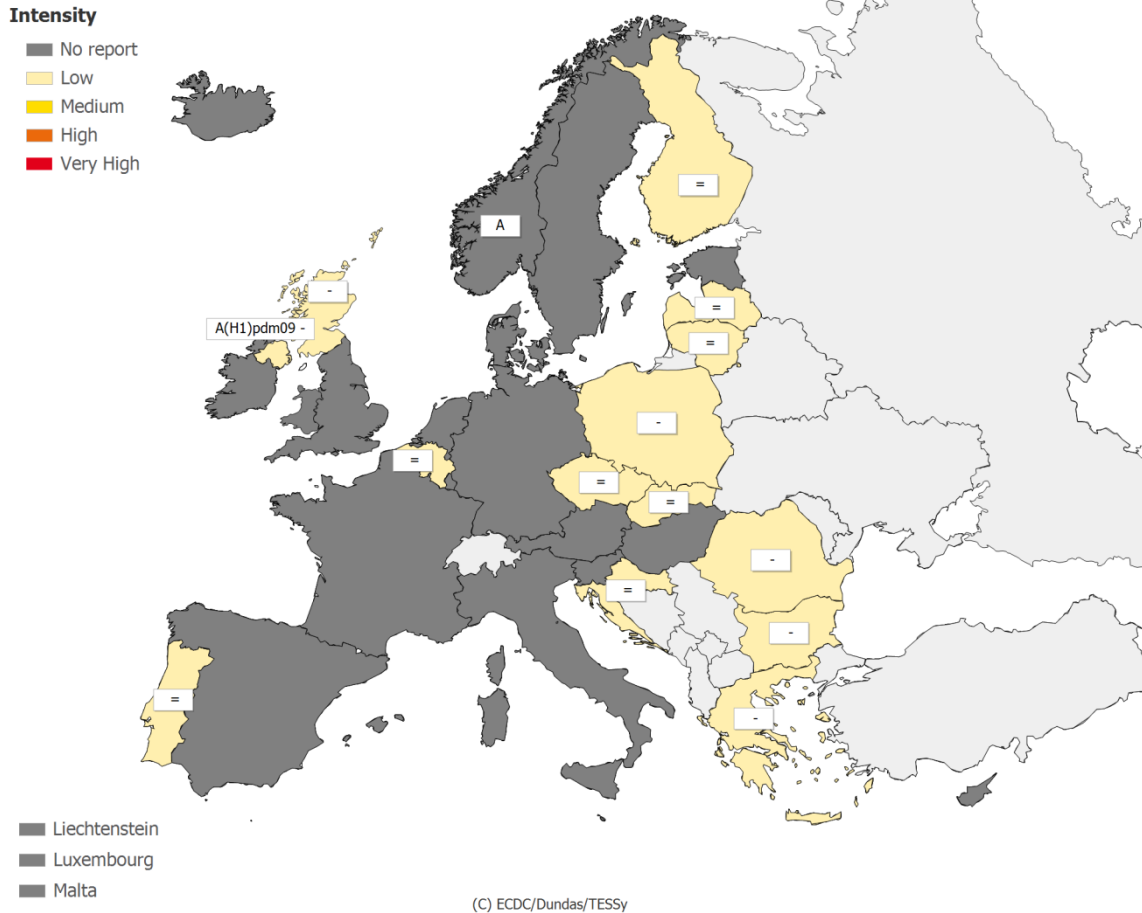
For week 51/2013, clinical data (ILI or ARI) were reported by 13 countries. All of them reported low-intensity influenza activity, the lowest category of reporting (Table 1, Map 1).

Geographic patterns of influenza activity were reported as sporadic by five countries and the UK (Scotland). All other countries reported no activity (Table 1, Map 2).

Stable or decreasing trends were reported by all countries (Table 1, Map 2).

Among the countries reporting influenza-virus-positive sentinel specimens, only Belgium reported an increase in clinical rates.

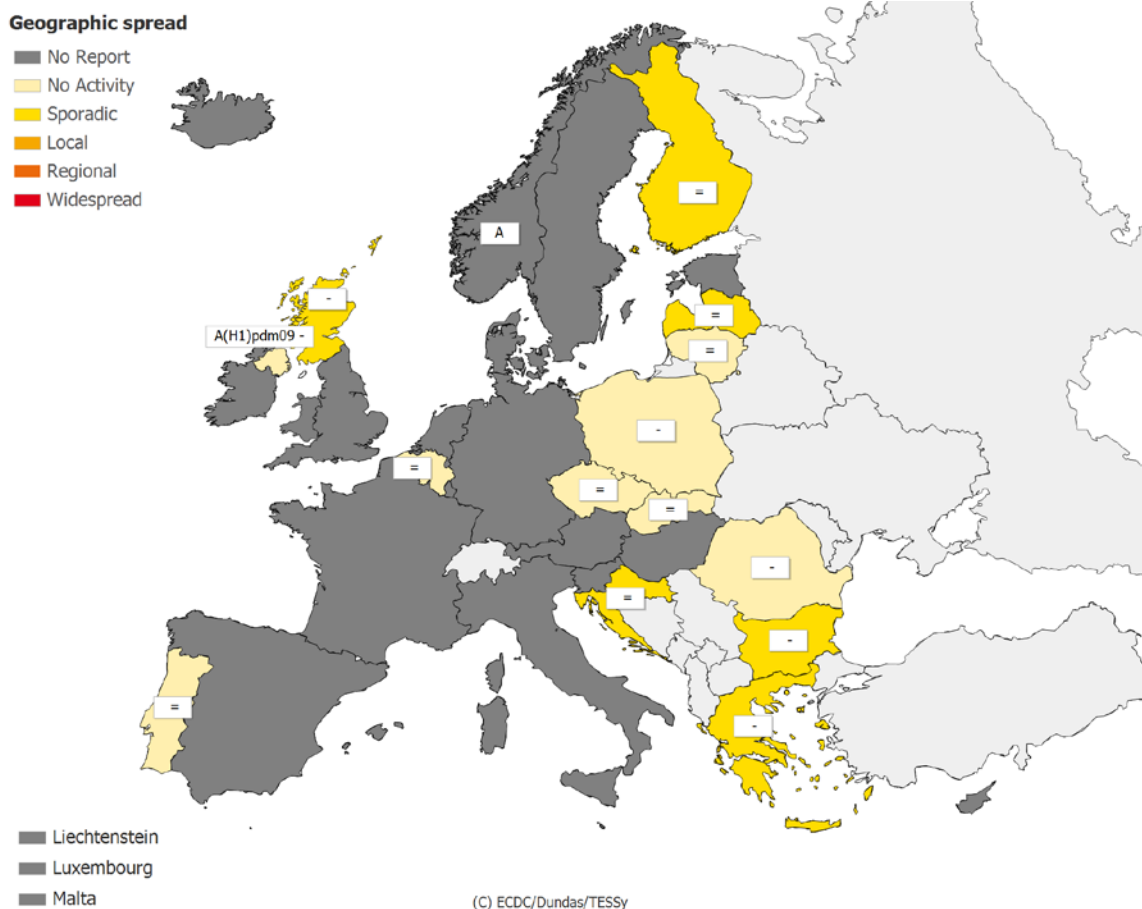
Map 1. Intensity for week 51/2013



* 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	Type A
Very high	Particularly severe levels of influenza activity	A(H1)pdm09	Type A, Subtype (H1)pdm09

Map 2. Geographic spread for week 51/2013



* 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	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)pdm09	Type A, Subtype (H1)pdm09
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 51/2013

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				-	-	0.0	-	-		
Belgium	Low	No activity	Stable	10	None	10.0	53.4	1742.9	Graphs	Graphs
Bulgaria	Low	Sporadic	Decreasing	8	None	12.5	-	923.3	Graphs	Graphs
Croatia	Low	Sporadic	Stable	-	-	0.0	-	-	Graphs	Graphs
Cyprus				-	-	0.0	-	-		
Czech Republic	Low	No activity	Stable	-	-	0.0	27.3	939.5	Graphs	Graphs
Denmark				-	-	0.0	-	-		
Estonia				-	-	0.0	-	-		
Finland	Low	Sporadic	Stable	8	None	12.5	-	-	Graphs	Graphs
France				-	-	0.0	-	-		
Germany				-	-	0.0	-	-		
Greece	Low	Sporadic	Decreasing	5	None	0.0	5123.5	-	Graphs	Graphs
Hungary				-	-	0.0	-	-		
Iceland				0	-	0.0	-	-	Graphs	Graphs
Ireland				-	-	0.0	-	-		
Italy				-	-	0.0	-	-		
Latvia	Low	Sporadic	Stable	-	-	0.0	0.0	779.2	Graphs	Graphs
Lithuania	Low	No activity	Stable	5	None	0.0	0.9	478.4	Graphs	Graphs
Luxembourg				5	-	0.0	-*	-*	Graphs	Graphs
Malta				1	None	0.0	-*	-*	Graphs	Graphs
Netherlands				4	None	25.0	-	-	Graphs	Graphs
Norway				2	A	0.0	-	-	Graphs	Graphs
Poland	Low	No activity	Decreasing	11	None	0.0	201.1	-	Graphs	Graphs
Portugal	Low	No activity	Stable	2	None	0.0	12.7	-	Graphs	Graphs
Romania	Low	No activity	Decreasing	2	-	0.0	1.5	720.2	Graphs	Graphs
Slovakia	Low	No activity	Stable	4	None	0.0	169.4	1795.5	Graphs	Graphs
Slovenia				12	None	0.0	-	-	Graphs	Graphs
Spain				-	-	0.0	-	-		
Sweden				-	-	0.0	-	-		
UK - England				-	-	0.0	-	-		
UK - Northern Ireland	Low	No activity	Decreasing	2	A(H1N1)pdm09	0.0	9.9	497.3	Graphs	Graphs
UK - Scotland	Low	Sporadic	Decreasing	30	None	3.3	9.2	471.3	Graphs	Graphs
UK - Wales				-	-	0.0	-	-		
Europe				111		4.5				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 51/2013, 15 countries tested a total of 111 sentinel specimens, five (5%) of which from five of the countries were positive for influenza virus (Tables 1–2, Figures 1–2).

Since week 40/2013, of 131 sentinel specimens positive for influenza, 114 (87%) were type A and 17 (13%) were type B. Of 92 subtyped influenza A viruses, 49 (53%) were A(H3) and 43 (47%) were A(H1)pdm09.

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, 35 A(H1)pdm09, 20 A(H3) viruses and two B viruses have been tested for susceptibility to the neuraminidase inhibitors oseltamivir and zanamivir: none showed genetic or phenotypic (IC₅₀) evidence for reduced inhibition.

In week 51/2013, 13 countries reported 281 respiratory syncytial virus (RSV) detections (Figure 3), much less than in previous weeks. This decrease is very likely to be due to the fact that few countries reported during the Christmas holiday period.

Table 2. Weekly and cumulative influenza virus detections by type, subtype and surveillance system, weeks 40–51/2013

Virus type/subtype	Current period Sentinel	Current period Non-sentinel	Season Sentinel	Season Non-sentinel
Influenza A	4	25	114	424
A(H1)pdm09	2	8	43	150
A(H3)	1	4	49	84
A(subtype unknown)	1	13	22	190
Influenza B	1	8	17	101
B(Vic) lineage	0	0	0	1
B(Yam) lineage	0	0	2	11
Unknown lineage	1	8	15	89
Total influenza	5	33	131	525

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 40–51/2013

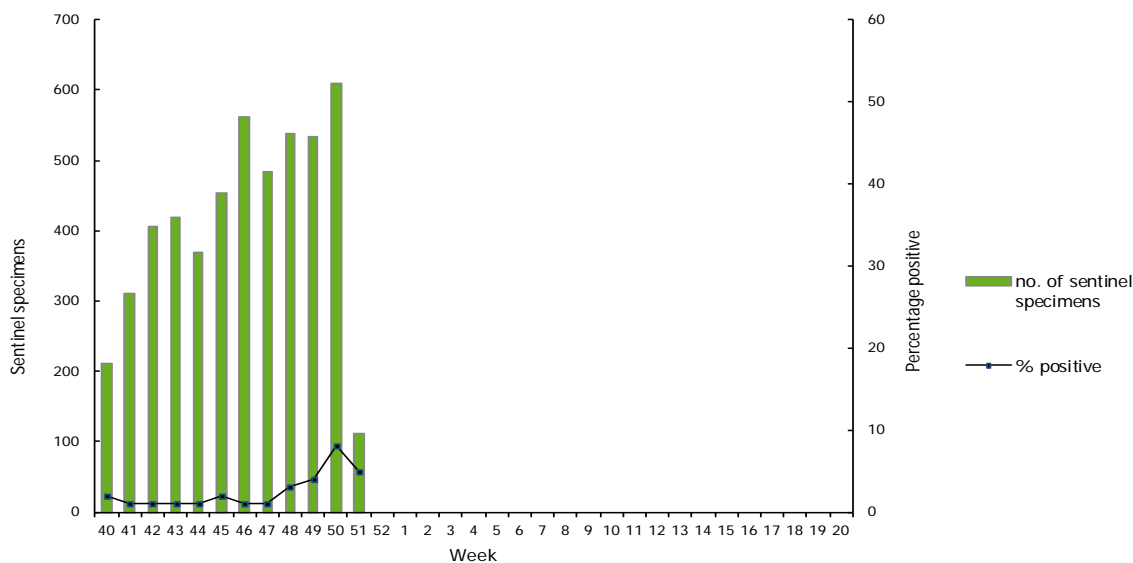


Figure 2. Number of sentinel specimens positive for influenza virus, by type, subtype and by week of report, weeks 40–51/2013

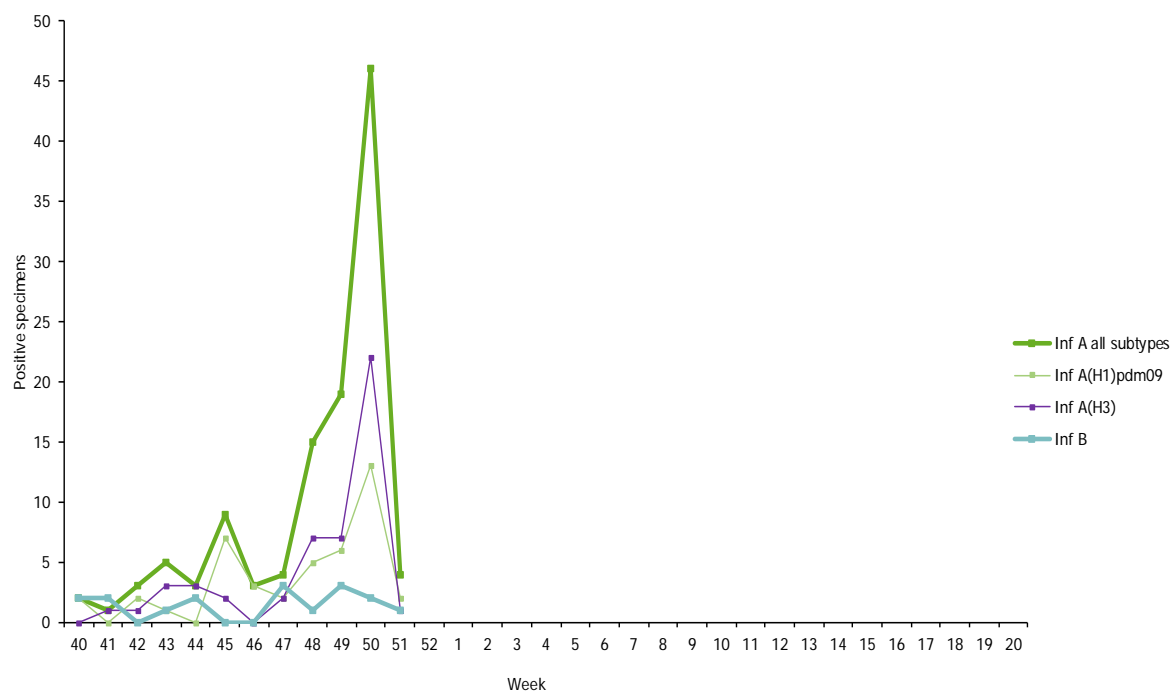


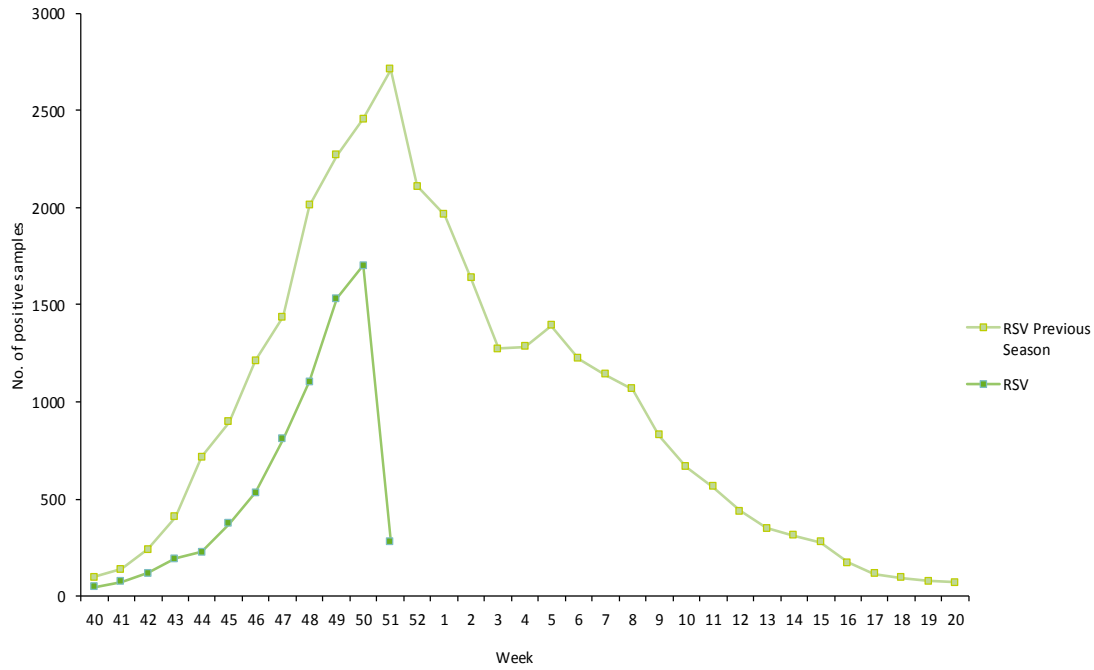
Table 3. Results of antigenic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40–51/2013

Antigenic group	Number of viruses
A(H1)pdm09 A/California/7/2009 (H1N1)-like	9
A(H3) A/Texas/50/2012 (H3N2)-like	22
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 40–51/2013

Phylogenetic group	Number of viruses
A(H1)pdm09 group 6 representative A/St Petersburg/27/2011	26
A(H3) subgroup 3C repr, A/Texas/50/2012	39
B(Vic) lineage - clade representative B/Brisbane/60/2008	1
B(Yam)-lineage clade repr. B/Wisconsin/1/2010	3
B(Yam)-lineage clade 2 representative B/Massachusetts/02/2012	6

Figure 3. Respiratory syncytial virus (RSV) detections, sentinel and non-sentinel, weeks 40–51/2013



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 40/2012, five countries have reported 40 hospitalised laboratory-confirmed influenza cases, but no cases were reported in week 51/2013 (Table 5). One fatal case was reported by France for week 49/2013.

Of the 40 hospitalised laboratory-confirmed influenza cases reported since week 40/2013, 29 (73%) were related to infection with influenza virus type A and 11 (27%) to infection with influenza virus type B (Table 6).

On 24 December, the US-CDC issued a health advisory to clinicians concerning 'reports of severe respiratory illness among young and middle-aged adults in November and December 2013, many of whom were infected with influenza A(H1N1)pdm09 (pH1N1) virus'. The advisory went on to state: 'Multiple pH1N1-associated hospitalizations, including many requiring intensive care unit admission, and some fatalities have been reported. The pH1N1 virus that emerged in 2009 caused more illness in children and young adults, compared to older adults, although severe illness was seen in all age groups. While it is not possible to predict which influenza viruses will predominate during the entire 2013-14 influenza season, pH1N1 has been the predominant circulating virus so far. For the 2013-14 season, if pH1N1 virus continues to circulate widely, illness that disproportionately affects young and middle-aged adults may occur' (<http://www.bt.cdc.gov/HAN/han00359.asp>).

Table 5. Cumulative number of hospitalised laboratory-confirmed influenza cases, week 40–51/2013

Country	Number of cases	Incidence of cases per 100 000	Number of fatal cases reported	Estimated population covered
France	5			
Ireland	3			
Spain	5			
Sweden	2			
United Kingdom	25	0.04		63 705 030
Total	40			

Table 6. Number of hospitalised laboratory-confirmed influenza cases by influenza type and subtype, week 51/2013 and cumulative for the season

Pathogen	Number of cases during current week	Cumulative number of cases since the start of the season
Influenza A		29
A(H1)pdm09		11
A(H3)		4
A(subtyping not performed)		14
Influenza B		11
Total		40

The EuroMOMO mortality monitoring system

The next EuroMOMO bulletin will be 9/10 January 2014. 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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