

## SURVEILLANCE REPORT

# Weekly influenza surveillance overview

20 December 2013

## Main surveillance developments in week 50/2013 (9-15 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 50/2013:

- Of 29 reporting countries, 28 recorded low-intensity influenza activity.
- Of 561 sentinel specimens tested across 24 countries, 45 (8%) were positive for influenza virus.
- Seven hospitalised laboratory-confirmed influenza cases were reported by four countries.

Since the start of 2013-2014 influenza surveillance in week 40/2013, there has been no evidence of sustained influenza activity in Europe. However, indicators suggest that the season may be starting in some countries.

**Sentinel surveillance of influenza-like illness (ILI)/ acute respiratory infection (ARI):** Bulgaria reported medium-intensity influenza activity. For more information, [click here](#).

**Virological surveillance:** Twenty-four countries collected and tested 561 sentinel specimens, of which 45 (8%) were positive for influenza virus. 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

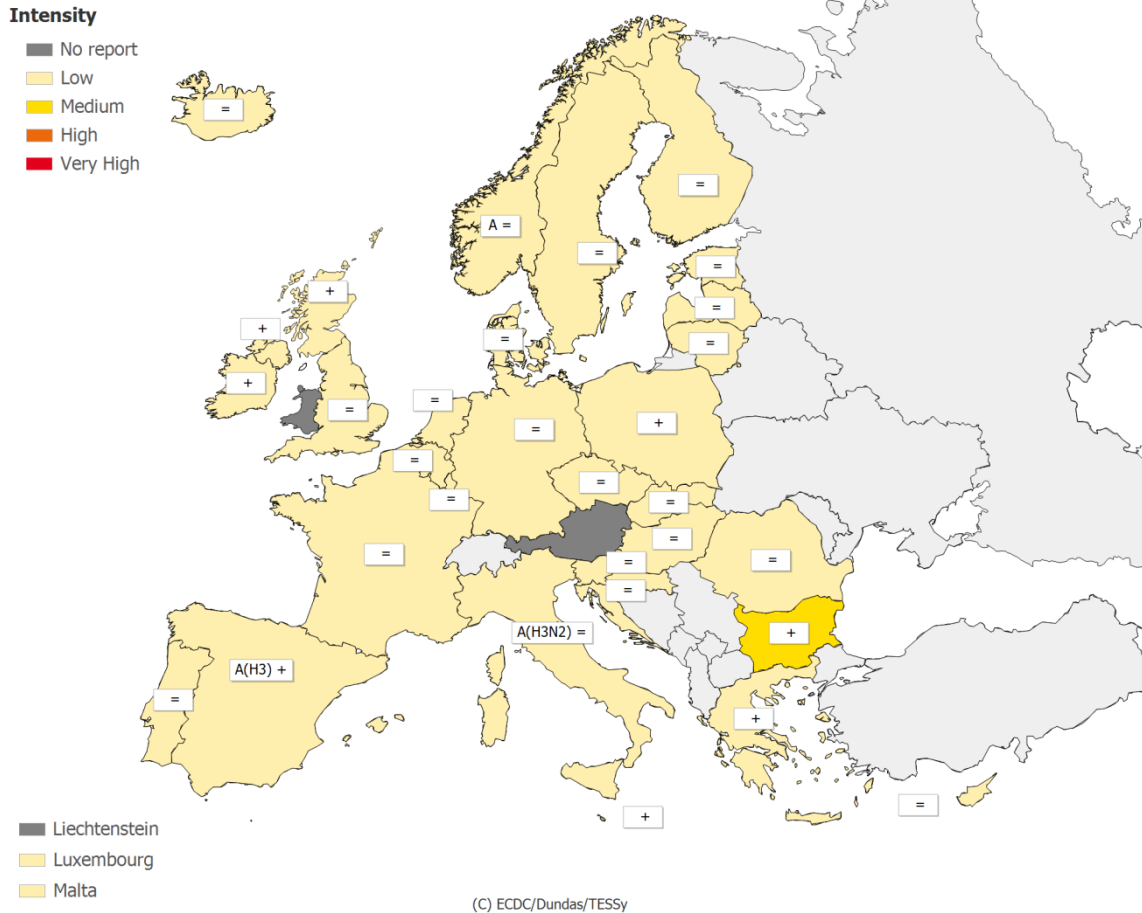
For week 50/2013, clinical data were reported by 29 countries. Bulgaria reported medium-intensity influenza activity while the other reporting countries experienced low intensity, the lowest category of reporting (Table 1, Map1).

Geographic patterns of influenza activity were reported as sporadic by 13 countries, compared to eight in week 49/2013. All other countries reported no activity (Table 1, Map 2).

Increasing trends were reported by Bulgaria, Greece, Ireland, Malta, Poland and Spain. All other countries reported stable trends (Table 1, Map 2).

Among countries reporting influenza-virus-positive sentinel specimens, substantial increases in clinical rates were observed in Bulgaria and France only. Since both countries use the ARI case definition, known to be less influenza-specific, this may reflect the contribution of other respiratory pathogens.

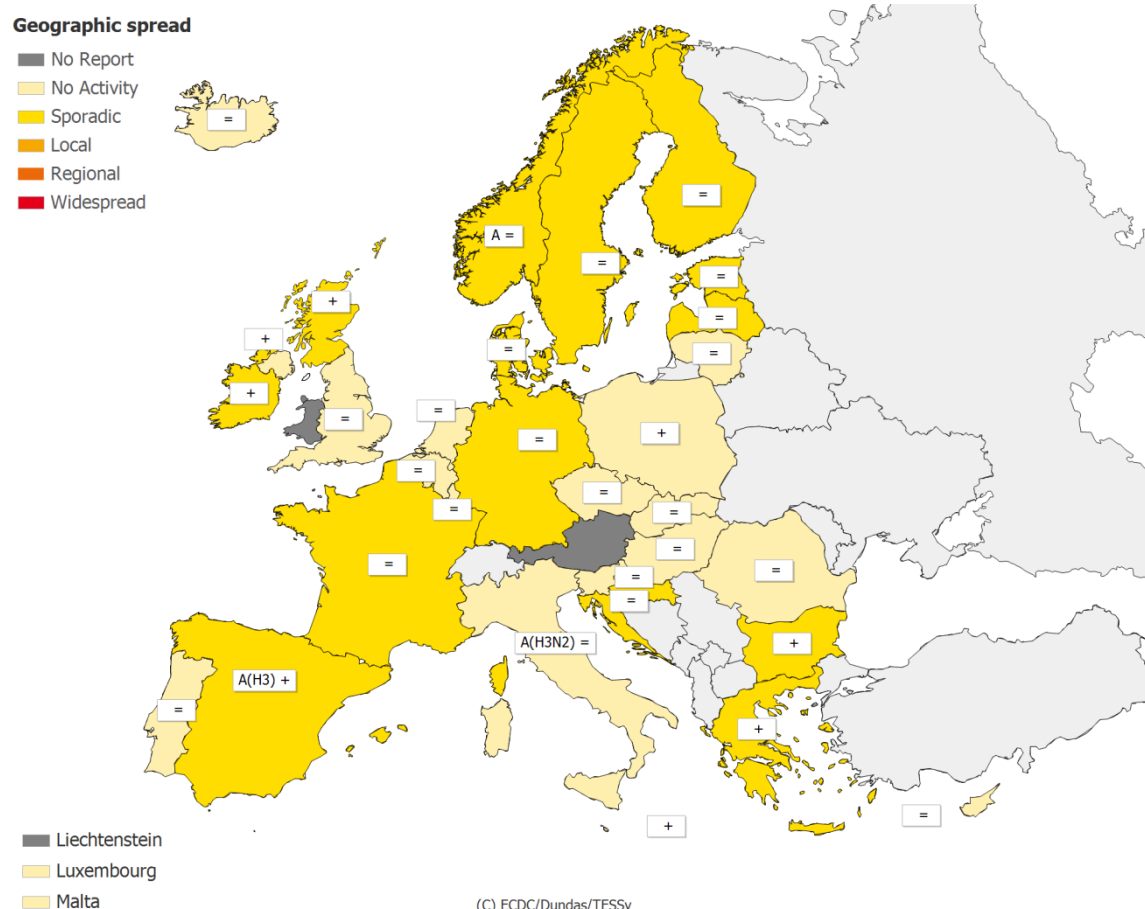
**Map 1. Intensity for week 50/2013**



\* 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:

<b>No report</b>	Intensity level was not reported	+	Increasing clinical activity
<b>Low</b>	No influenza activity or influenza at baseline levels	-	Decreasing clinical activity
<b>Medium</b>	Usual levels of influenza activity	=	Stable clinical activity
<b>High</b>	Higher than usual levels of influenza activity	<b>A</b>	Type A
<b>Very high</b>	Particularly severe levels of influenza activity	<b>A(H3)</b>	Type A, Subtype H3
		<b>A(H3N2)</b>	Type A, Subtype H3N2

Map 2. Geographic spread for week 50/2013



\* 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:

<b>No report</b>	Activity level was not reported	+	Increasing clinical activity
<b>No activity</b>	No evidence of influenza virus activity (clinical activity remains at baseline levels)	-	Decreasing clinical activity
<b>Sporadic</b>	Isolated cases of laboratory confirmed influenza infection	=	Stable clinical activity
<b>Local outbreak</b>	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)	<b>A</b>	Type A
<b>Regional activity</b>	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)	<b>A(H3)</b>	Type A, Subtype H3
<b>Widespread</b>	Influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population (laboratory confirmed)	<b>A(H3N2)</b>	Type A, Subtype H3N2

**Table 1. Epidemiological and virological overview by country, week 50/2013**

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	16	None	12.5	28.9	1949.1	Graphs	Graphs
Bulgaria	Medium	Sporadic	Increasing	16	None	6.3	-	1149.8	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	15	None	0.0	27.0	941.6	Graphs	Graphs
Denmark	Low	Sporadic	Stable	1	None	0.0	44.8	-	Graphs	Graphs
Estonia	Low	Sporadic	Stable	1	None	0.0	6.3	251.2	Graphs	Graphs
Finland	Low	Sporadic	Stable	8	None	12.5	-	-	Graphs	Graphs
France	Low	Sporadic	Stable	63	None	11.1	-	1824.2	Graphs	Graphs
Germany	Low	Sporadic	Stable	67	None	0.0	-	1131.9	Graphs	Graphs
Greece	Low	Sporadic	Increasing	0	None	0.0	89.1	-	Graphs	Graphs
Hungary	Low	No activity	Stable	17	None	0.0	87.6	-	Graphs	Graphs
Iceland	Low	No activity	Stable	0	-	0.0	1.6	-	Graphs	Graphs
Ireland	Low	Sporadic	Increasing	8	None	0.0	9.7	-	Graphs	Graphs
Italy	Low	No activity	Stable	24	A(H3N2)	16.7	155.7	-	Graphs	Graphs
Latvia	Low	Sporadic	Stable	1	None	100.0	0.0	897.0	Graphs	Graphs
Lithuania	Low	No activity	Stable	5	None	0.0	1.0	567.1	Graphs	Graphs
Luxembourg	Low	No activity	Stable	5	-	0.0	-*	-*	Graphs	Graphs
Malta	Low	No activity	Increasing	-	-	0.0	-*	-*	Graphs	Graphs
Netherlands	Low	No activity	Stable	12	None	0.0	30.2	-	Graphs	Graphs
Norway	Low	Sporadic	Stable	6	A	0.0	30.9	-	Graphs	Graphs
Poland	Low	No activity	Increasing	7	None	0.0	239.9	-	Graphs	Graphs
Portugal	Low	No activity	Stable	2	None	0.0	9.0	-	Graphs	Graphs
Romania	Low	No activity	Stable	3	-	0.0	2.5	767.9	Graphs	Graphs
Slovakia	Low	No activity	Stable	7	None	0.0	174.2	1717.4	Graphs	Graphs
Slovenia	Low	No activity	Stable	12	None	0.0	1.3	1117.5	Graphs	Graphs
Spain	Low	Sporadic	Increasing	103	A(H3)	19.4	27.7	-	Graphs	Graphs
Sweden	Low	Sporadic	Stable	45	-	6.7	5.8	-	Graphs	Graphs
UK - England	Low	No activity	Stable	82	None	7.3	4.6	263.0	Graphs	Graphs
UK - Northern Ireland	Low	No activity	Increasing	2	None	0.0	13.7	464.9	Graphs	Graphs
UK - Scotland	Low	Sporadic	Increasing	33	None	0.0	16.6	463.0	Graphs	Graphs
UK - Wales				-	-	0.0	-	-		
<b>Europe</b>					<b>561</b>		<b>8.0</b>			<b>Graphs</b>

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

# Virological surveillance

## Weekly analysis – virology

For week 50/2013, 24 countries tested a total of 561 sentinel specimens, of which 45 (8%) from nine countries were positive for influenza virus (Tables 1–2, Figures 1–2).

Since week 40/2013, of 121 sentinel specimens positive for influenza, 107 (88%) were type A and 14 (12%) were type B. Of 86 subtyped influenza viruses, 38 (44%) were A(H1)pdm09 and 48 (56%) were A(H3).

Non-sentinel virus detections are summarised in Table 2.

Since week 40/2013, none of the 29 antigenically characterised viruses have differed substantially from the [current vaccine strains recommended by WHO](#) (Table 3).

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, 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 (IC<sub>50</sub>) evidence for reduced inhibition.

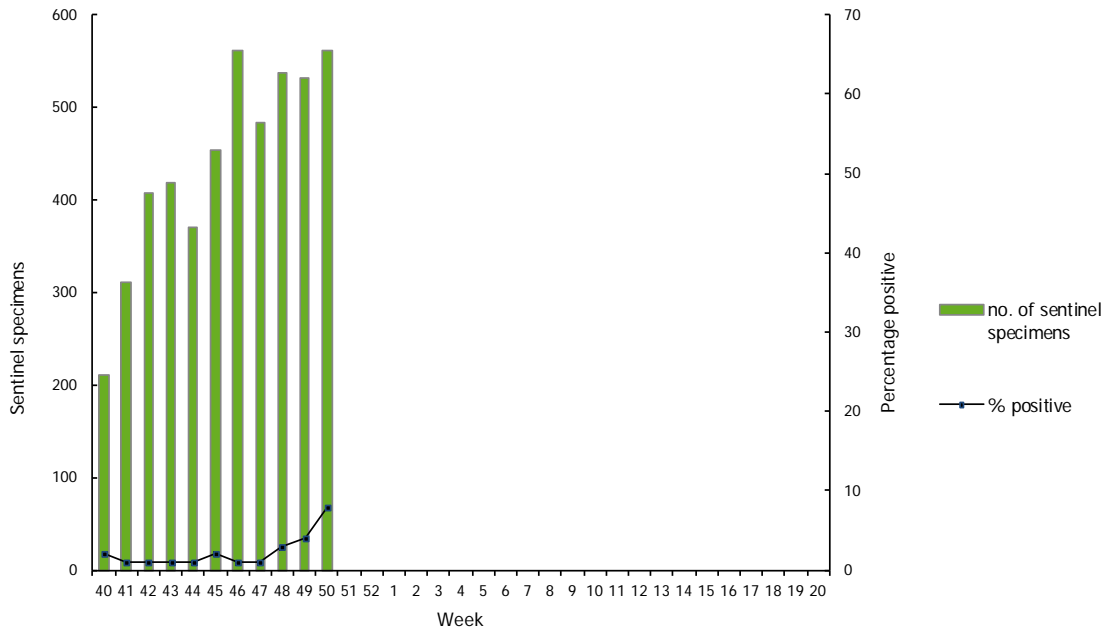
For week 50/2013, 13 countries reported 1 569 respiratory syncytial virus (RSV) detections. RSV detections have continuously increased since week 40/2013 (Figure 3).

**Table 2. Weekly and cumulative influenza virus detections by type, subtype and surveillance system, weeks 40–50/2013**

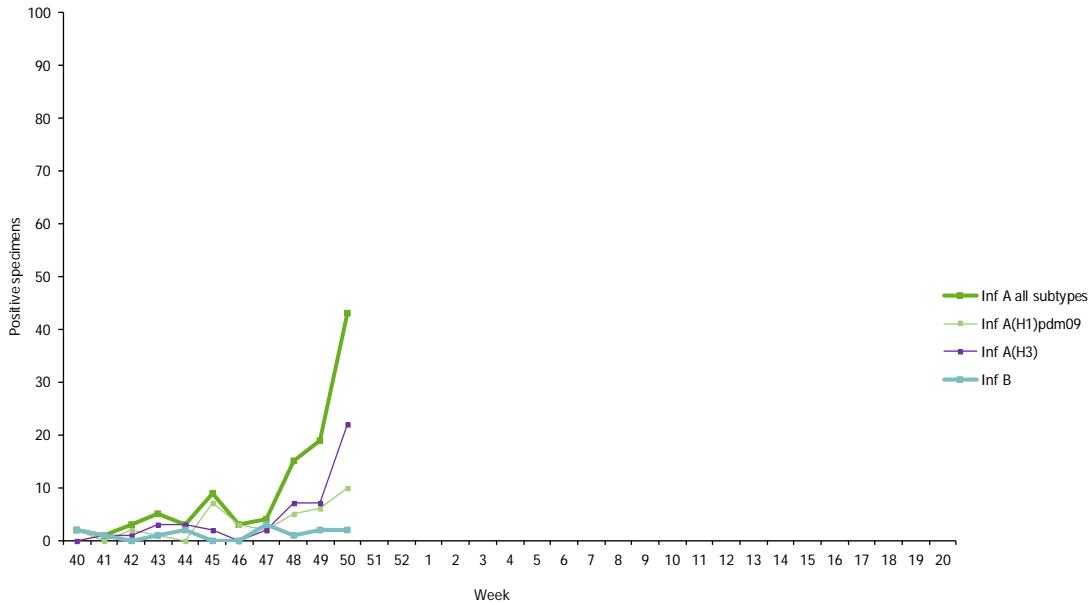
Virus type/subtype	Current period Sentinel	Current period Non-sentinel	Season Sentinel	Season Non-sentinel
Influenza A	43	83	107	392
A(H1)pdm09	10	27	38	138
A(H3)	22	9	48	74
A(subtype unknown)	11	47	21	180
Influenza B	2	8	14	91
B(Vic) lineage	0	0	0	1
B(Yam) lineage	0	0	0	10
Unknown lineage	2	8	14	80
<b>Total influenza</b>	<b>45</b>	<b>91</b>	<b>121</b>	<b>483</b>

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 40–50/2013**



**Figure 2. Number of sentinel specimens positive for influenza virus, by type, subtype and by week of report, weeks 40–50/2013**



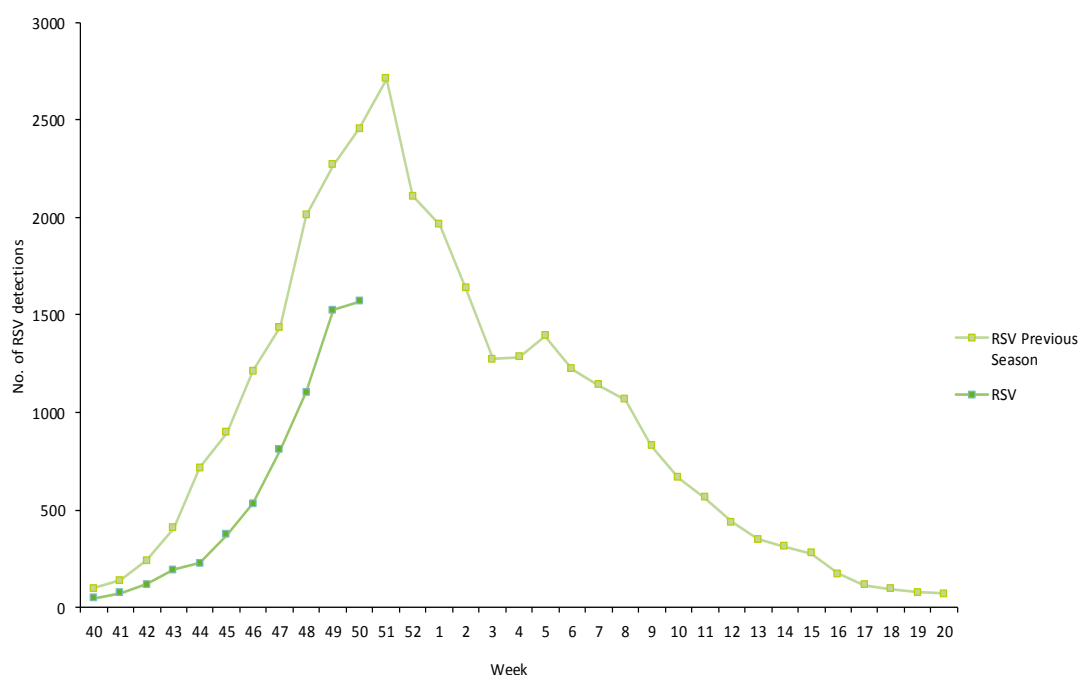


**Table 3. Results of antigenic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40–50/2013**

Antigenic group	Number of viruses
A(H1)pdm09 A/California/7/2009 (H1N1)-like	9
A(H3) A/Texas/50/2012 (H3N2)-like	16
B/Brisbane/60/2008-like (B/Victoria/2/97 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 40–50/2013**

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	26
B(Yam)-lineage clade repr. B/Wisconsin/1/2010	2
B(Yam)-lineage clade 2 representative B/Massachusetts/02/2012	4

**Figure 3. Respiratory syncytial virus (RSV) detections, sentinel and non-sentinel, weeks 40–50/2013**

## 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. In addition, in the non-sentinel system in countries, influenza-specific reference laboratories collect and analyse influenza viruses and influenza virus positive clinical specimens submitted by hospital and peripheral diagnostic laboratories.

For details of the current virus strains recommended by WHO for vaccine preparation [click here](#).

# Hospital surveillance – severe influenza disease

## Weekly and seasonal analysis of hospitalised laboratory-confirmed influenza cases

Since week 40/2013, five countries have reported 40 hospitalised laboratory-confirmed influenza cases, of which seven were reported in week 50/2013 by four countries (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 were related to infection with influenza virus type A and 11 to infection with influenza virus type B (Table 6).

**Table 5. Cumulative number of hospitalised laboratory-confirmed influenza cases, weeks 40–50/2013**

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
France	5		1		
Ireland	3				
Spain	5				
Sweden	2				
United Kingdom	25	0.04			63 705 030
<b>Total</b>	<b>40</b>		<b>1</b>		

**Table 6. Number of hospitalised laboratory-confirmed influenza cases by influenza type and subtype, week 50/2013 and cumulative for the season**

Pathogen	Number of cases during current week	Cumulative number of cases since the start of the season
Influenza A	7	29
A(H1)pdm09	4	11
A(H3)	1	4
A(subtyping not performed)	2	14
Influenza B		11
<b>Total</b>	<b>7</b>	<b>40</b>

## The EuroMOMO mortality monitoring system

Week 50: all-cause mortality has been within the normal range for all reporting countries. Further details are available at <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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