

SURVEILLANCE REPORT

Weekly influenza surveillance overview

11 April 2014

Main surveillance developments in week 14/2014 (31 March – 6 April 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 14/2014:

- Low intensity was reported by all reporting countries except UK (Northern Ireland) which reported medium intensity.
- Of the 404 sentinel specimens tested across 23 countries, 31% were positive for influenza virus. Of these, 95% were type A and 5% type B.
- Six countries reported 76 hospitalised, laboratory-confirmed influenza cases, 28 of which were admitted to intensive care units.

Overall, influenza activity is declining but influenza viruses were still detected in the vast majority of reporting countries.

Sentinel surveillance of influenza-like illness (ILI)/ acute respiratory infection (ARI): Although low intensity was reported by all but one reporting country, local to widespread activity was reported by 24 countries. For more information, [click here](#).

Virological surveillance: Since week 40/2013, of 6 841 sentinel specimens testing positive for influenza virus, 6 688 (98%) were type A and 153 (2%) were type B. For more information, [click here](#).

Hospital surveillance of laboratory-confirmed influenza cases: Since week 40/2013, five countries have reported a total of 384 fatal cases with 381 (99%) being associated with influenza virus type A infection and three (1%) with type B virus. For more information, [click here](#).

Sentinel surveillance (ILI/ARI)

Weekly and seasonal analysis

For week 14/2014, clinical data were reported by 29 countries. Low intensity was reported by all reporting countries except UK (Northern Ireland) which reported medium intensity (Table 1, Map 1) with ILI rates remaining at a high level.

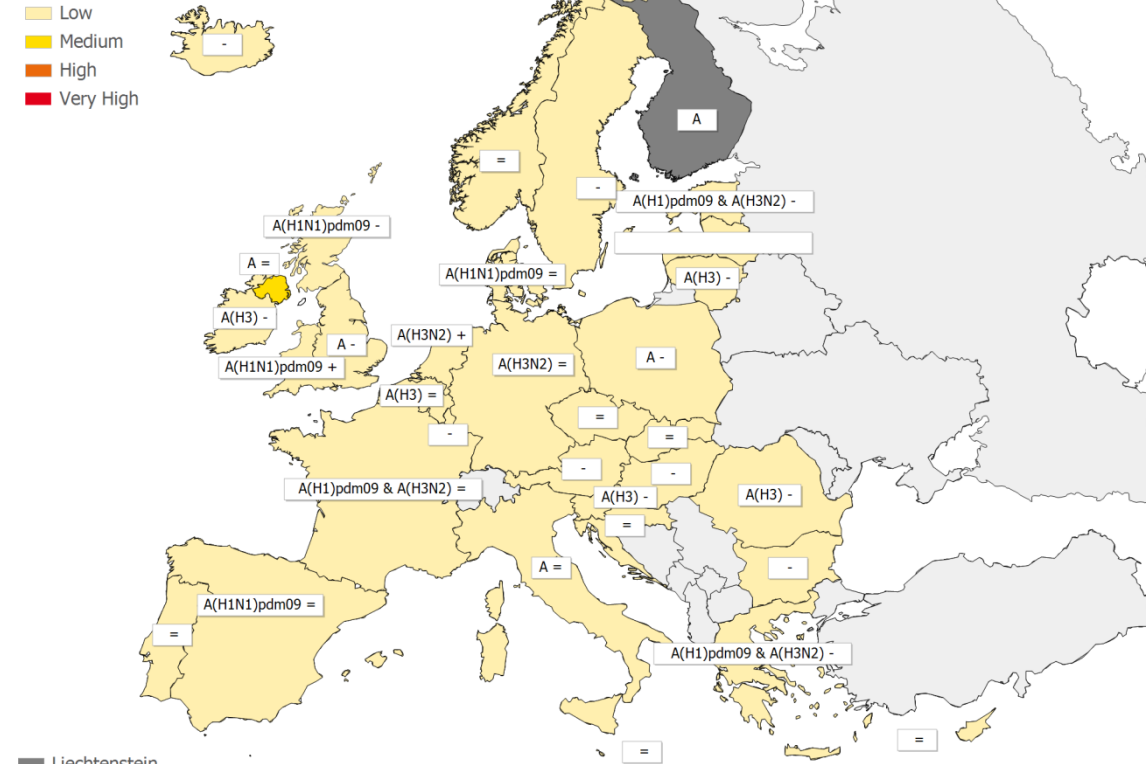
Geographic patterns of influenza activity varied across Europe: widespread activity was reported by Croatia, and regional activity by Austria, Germany, Greece, the Netherlands and the UK (England). Local or sporadic activity was reported by 17 countries and the UK (Northern Ireland, Scotland and Wales). Bulgaria, Cyprus, Italy and Malta reported no influenza activity (Table 1, Map 2).

Increasing trends were reported by the Netherlands and the UK (Wales). Fourteen countries and the UK (Northern Ireland) reported stable trends, while 13 countries and the UK (England and Scotland) reported decreasing trends. (Table 1, Map 2).

Map 1. Intensity for week 14/2014

Intensity

- No report
- Low
- Medium
- High
- Very High



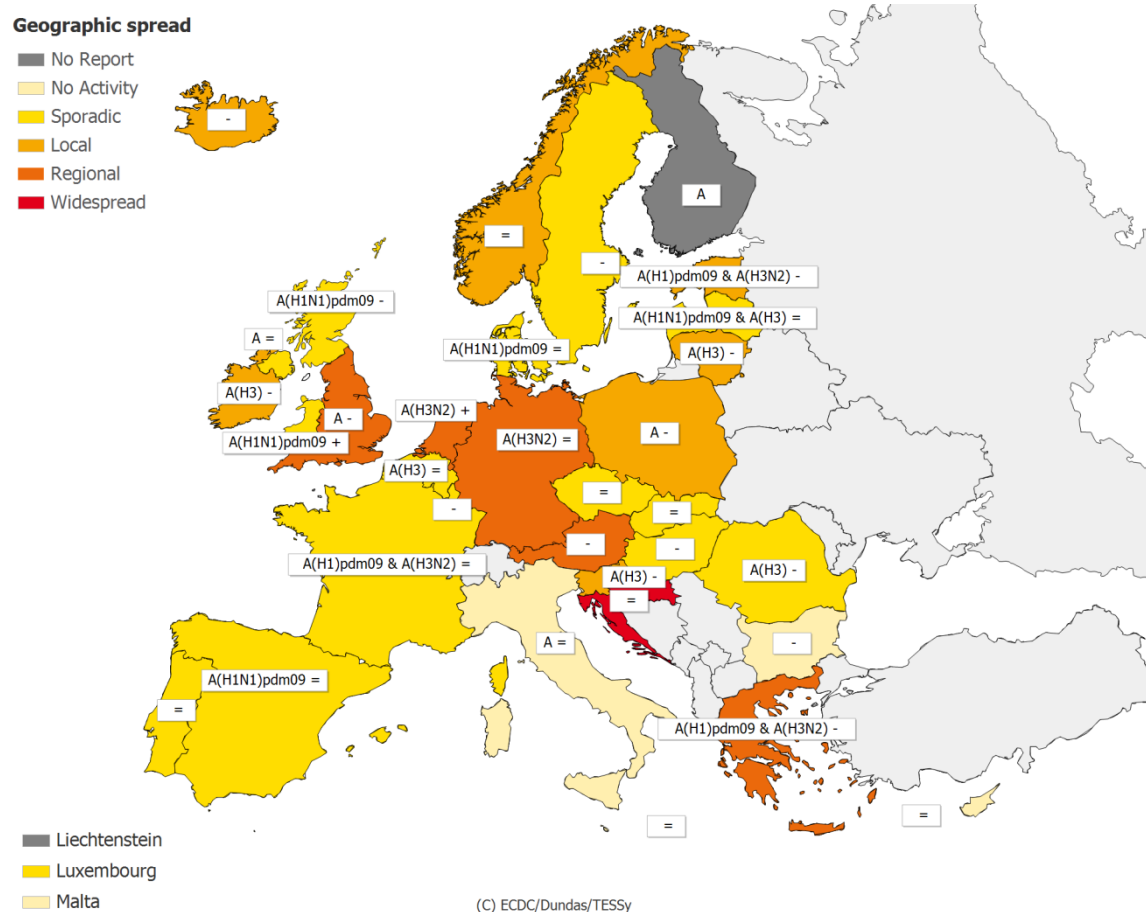
- Liechtenstein
- Luxembourg
- Malta

(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	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 & A(H3N2)	Type A, Subtype (H1)pdm09 and H3N2
		A(H1N1)pdm09	Type A, Subtype (H1N1)pdm09
		A(H1N1)pdm09 & A(H3)	Type A, Subtype (H1N1)pdm09 and H3
		A(H3)	Type A, Subtype H3
		A(H3N2)	Type A, Subtype H3N2

Map 2. Geographic spread for week 14/2014



* 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)pdm09 & A(H3N2)	Type A, Subtype (H1)pdm09 and H3N2
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(H1N1)pdm09	Type A, Subtype (H1N1)pdm09
		A(H1N1)pdm09 & A(H3)	Type A, Subtype (H1N1)pdm09 and H3
		A(H3)	Type A, Subtype H3
		A(H3N2)	Type A, Subtype H3N2

Table 1. Epidemiological and virological overview by country, week 14/2014

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	Regional	Decreasing	14	None	42.9	434.4	-	Graphs	Graphs
Belgium	Low	Sporadic	Stable	8	A(H3)	75.0	64.7	1615.3	Graphs	Graphs
Bulgaria	Low	No activity	Decreasing	0	None	0.0	-	481.4	Graphs	Graphs
Croatia	Low	Widespread	Stable	-	-	0.0	-	-	Graphs	Graphs
Cyprus	Low	No activity	Stable	-	-	0.0	-*	-*	Graphs	Graphs
Czech Republic	Low	Sporadic	Stable	10	None	10.0	18.4	741.8	Graphs	Graphs
Denmark	Low	Sporadic	Stable	12	A(H1N1)pdm09	16.7	22.7	-	Graphs	Graphs
Estonia	Low	Local	Decreasing	9	A(H1)pdm09 & A(H3N2)	111.1	-	-	Graphs	Graphs
Finland				6	A	16.7	-	-	Graphs	Graphs
France	Low	Sporadic	Stable	48	A(H1)pdm09 & A(H3N2)	41.7	-	1167.2	Graphs	Graphs
Germany	Low	Regional	Stable	72	A(H3N2)	18.1	-	1092.4	Graphs	Graphs
Greece	Low	Regional	Decreasing	3	A(H1)pdm09 & A(H3N2)	0.0	113.7	-	Graphs	Graphs
Hungary	Low	Sporadic	Decreasing	13	None	30.8	53.4	-	Graphs	Graphs
Iceland	Low	Local	Decreasing	0	-	0.0	8.4	-	Graphs	Graphs
Ireland	Low	Local	Decreasing	17	A(H3)	64.7	16.2	-	Graphs	Graphs
Italy	Low	No activity	Stable	17	A	23.5	146.4	-	Graphs	Graphs
Latvia	Low	Sporadic	Stable	0	A(H1N1)pdm09 & A(H3)	0.0	0.0	883.7	Graphs	Graphs
Lithuania	Low	Local	Decreasing	13	A(H3)	69.2	15.5	649.5	Graphs	Graphs
Luxembourg	Low	Sporadic	Decreasing	8	-	37.5	-*	-*	Graphs	Graphs
Malta	Low	No activity	Stable	-	-	0.0	-*	-*	Graphs	Graphs
Netherlands	Low	Regional	Increasing	12	A(H3N2)	41.7	49.9	-	Graphs	Graphs
Norway	Low	Local	Stable	0	-	0.0	52.6	-	Graphs	Graphs
Poland	Low	Local	Decreasing	17	A	29.4	306.9	-	Graphs	Graphs
Portugal	Low	Sporadic	Stable	2	None	50.0	12.7	-	Graphs	Graphs
Romania	Low	Sporadic	Decreasing	5	A(H3)	20.0	2.1	670.2	Graphs	Graphs
Slovakia	Low	Sporadic	Stable	3	None	33.3	-	-	Graphs	Graphs
Slovenia	Low	Local	Decreasing	9	A(H3)	55.6	1.2	919.8	Graphs	Graphs
Spain	Low	Sporadic	Stable	33	A(H1N1)pdm09	18.2	13.8	-	Graphs	Graphs
Sweden	Low	Sporadic	Decreasing	6	None	66.7	2.4	-	Graphs	Graphs
UK - England	Low	Regional	Decreasing	42	A	11.9	1.7	213.4	Graphs	Graphs
UK - Northern Ireland	Medium	Sporadic	Stable	4	A	25.0	32.6	418.8	Graphs	Graphs
UK - Scotland	Low	Sporadic	Decreasing	15	A(H1N1)pdm09	13.3	10.4	399.5	Graphs	Graphs
UK - Wales	Low	Sporadic	Increasing	6	A(H1N1)pdm09	16.7	5.9	-	Graphs	Graphs
Europe				404		31.4				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 and seasonal analysis

For week 14/2014, 404 sentinel specimens were tested across 23 countries and 126 (31%) were positive for influenza virus (Tables 1–2, Figures 1–2). This is an increase on last week, but with approximately half the number of specimens tested (Figure 1). Of the positive specimens, 120 (95%) were type A and six (5%) were type B (Tables 1–2). Of 95 type A viruses subtyped, 64 (67%) were A(H3) and 31 (33%) A(H1)pdm09.

Since week 40/2013, of 6 841 sentinel specimens testing positive for influenza virus, 6 688 (98%) were type A and 153 (2%) were type B. Of the 6 199 subtyped influenza viruses, 3 351 (54%) were A(H1)pdm09 and 2 848 (46%) were A(H3). Countries have reported variable patterns of A(H1)pdm09 and A(H3) as the dominant subtype (Table 1 and Map 2). 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 1 420 antigenically characterised viruses have differed significantly from the [current vaccine viruses recommended by WHO](#). A total of 10 were reported to be non-attributable to a category (Table 3).

For week 14/2014, 15 countries reported 269 respiratory syncytial virus detections, maintaining the downward trend since week 1/2014 (Figure 3).

Table 2. Weekly and cumulative influenza virus detections by type, subtype and surveillance system, weeks 40/2013–14/2014

Virus type/subtype	Current period Sentinel	Current period Non-sentinel	Season Sentinel	Season Non-sentinel
Influenza A	120	854	6688	24193
A(H1)pdm09	31	209	3351	10388
A(H3)	64	134	2848	4041
A(sub-type unknown)	25	511	489	9764
Influenza B	6	64	153	893
B(Vic) lineage	1	0	10	10
B(Yam) lineage	4	1	53	119
Unknown lineage	1	63	90	764
Total influenza	126	918	6841	25086

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 40/2013–14/2014

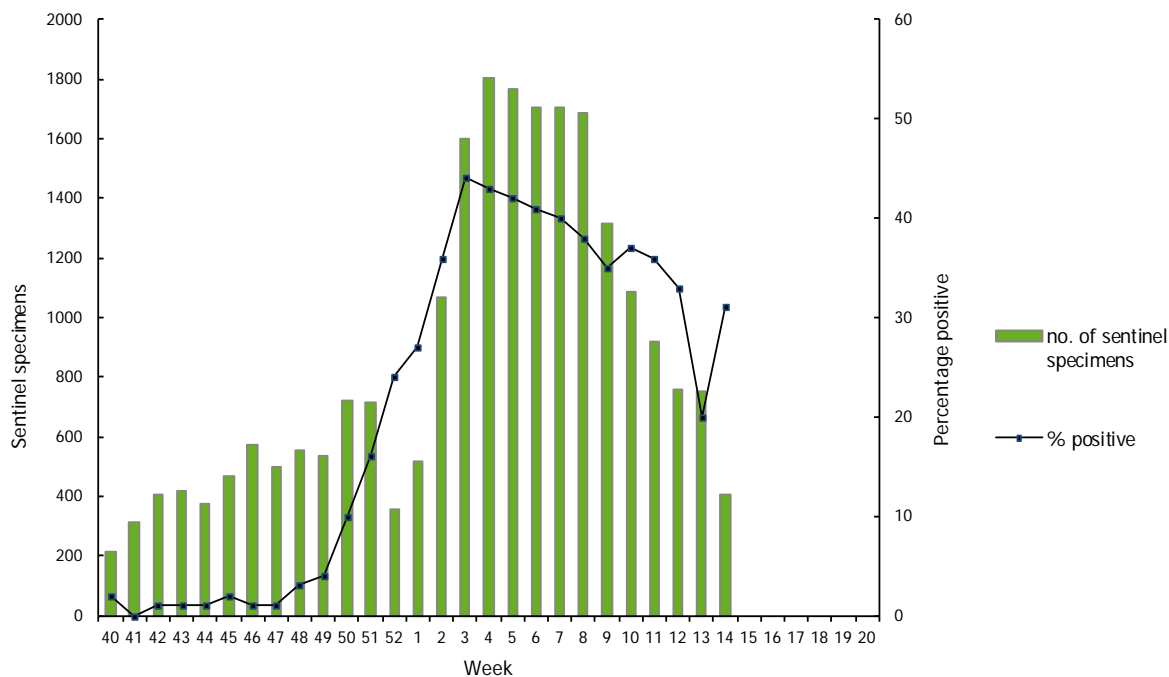


Figure 2. Number of sentinel specimens positive for influenza virus, by type, subtype and by week of report, weeks 40/2013–14/2014

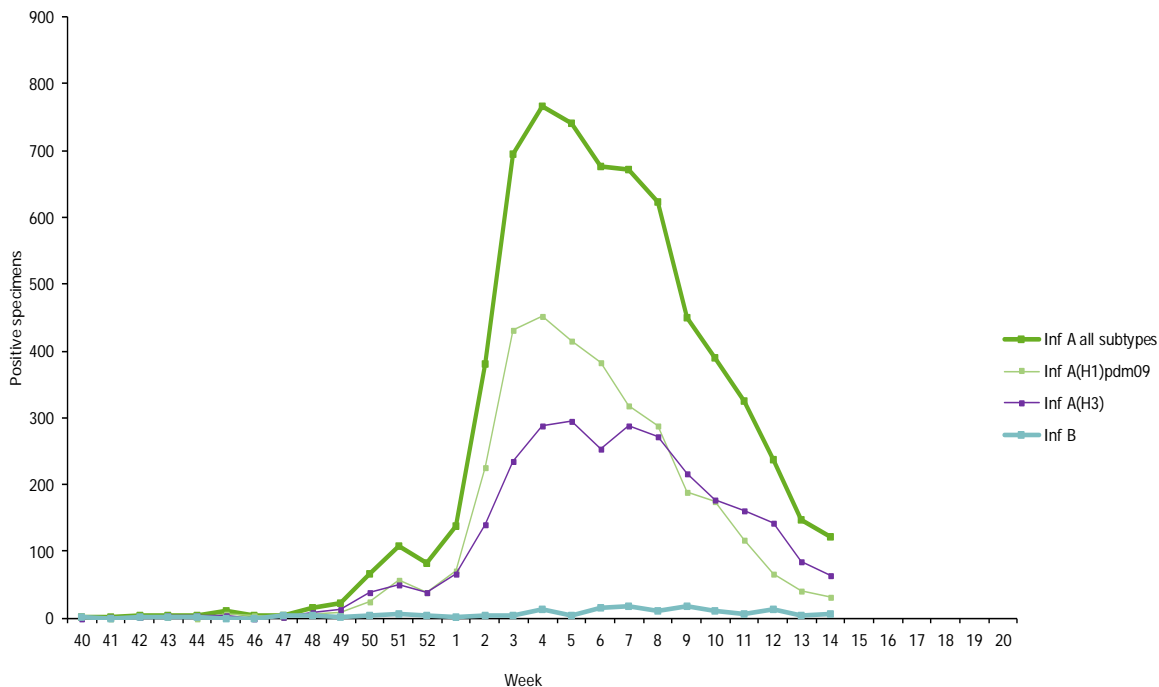
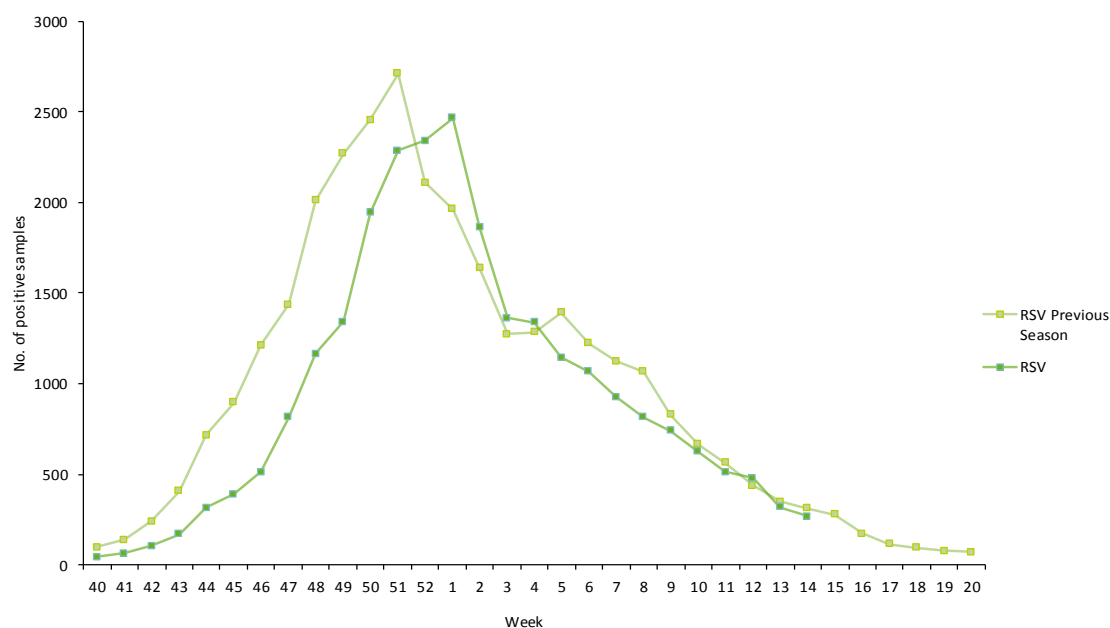


Table 3. Results of antigenic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40/2013–14/2014

Antigenic group	Number of viruses
A(H1)pdm09 A/California/7/2009 (H1N1)-like	831
A(H1)pdm09 not attributed to category	6
A(H3) A/Texas/50/2012 (H3N2)-like	535
A(H3) not attributed to category	4
B/Brisbane/60/2008-like (B/Victoria/2/87 lineage)	19
B/Massachusetts/02/2012-like (B/Yamagata/16/88-lineage)	22
B/Wisconsin/1/2010-like (B/Yamagata/16/88-lineage)	3

Table 4. Results of genetic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40/2013–14/2014

Phylogenetic group	Number of viruses
A(H1)pdm09 clade repr. A/California/7/2009 - A/St Petersburg/27/2011 group (6)	416
A(H3) clade representative A/Perth/16/2009 – A/Texas/50/2012 subgroup(3C)	366
B(Vic)-lineage clade 1A representative B/Brisbane/60/2008	8
B(Yam)-lineage clade 2 representative B/Massachusetts/02/2012	14
B(Yam)-lineage clade 3 representative B/Wisconsin/1/2010	19

Figure 3. Respiratory syncytial virus (RSV) detections, sentinel and non-sentinel, weeks 40/2013–14/2014

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

For week 14/2014, 76 hospitalised laboratory-confirmed influenza cases were reported by six countries (France, Ireland, Romania, Slovakia, Spain and the UK). Influenza A virus was detected in 74 cases and influenza B virus in two patients. Of the 76 hospitalised cases, 28 were admitted to intensive care units (ICU) (Table 5).

Since week 40/2013, seven countries have reported 4 525 hospitalised, laboratory-confirmed influenza cases: 4 472 (99%) were related to influenza virus type A infection and 53 (1%) to type B virus infection (Table 5). Of 3 047 subtyped influenza A viruses, 2 269 (74%) were A(H1)pdm09 and 778 (26%) were A(H3). A higher proportion of A(H1)pdm09 viruses has been detected in patients in ICUs (1 308 out of 1 527 subtyped, 86%) than in patients on regular wards (961 out of 1 521 subtyped, 63%).

Of the 3 710 hospitalised cases with reported age, 1 388 (38%) were 40–64 years old and 1 372 (37%) were over 64 years of age - the same distributions as in the previous week.

Five countries reported a total of 384 fatal cases (Table 6): 381 (99%) were associated with influenza virus type A infection and three (1%) with type B virus. Of 280 influenza A viruses subtyped from fatal cases, 227 (81%) were A(H1)pdm09 and 53 (19%) were A(H3). Patient age was reported for 380 of the fatal cases: 203 (53%) were 65 years or older.

Table 5. Number of hospitalised, laboratory-confirmed influenza cases by influenza type and subtype, week 14/2014 and cumulative since week 40/2013

Pathogen	Number of cases admitted to ICU during current week	Cumulative number of cases admitted to ICU since week 40/2013	Number of cases admitted to other wards during current week	Cumulative number of cases admitted to other wards since week 40/2013
Influenza A	28	2 353	46	2 119
A(H1)pdm09	13	1 308	10	961
A(H3)	3	219	25	559
A (subtyping not performed)	12	826	11	598
Influenza B	0	30	2	23
Total	28	2 383	48	2 142

Table 6. Cumulative number of hospitalised laboratory-confirmed influenza cases, weeks 40/2013–14/2014

Country	Number of cases admitted to ICU	Number of fatal cases reported in ICU	Number of cases admitted to other wards	Number of fatal cases reported in other wards
Finland	23	0	-*	-
France	615	83	-	-
Ireland	72	12	543	3
Romania	29	9	32	1
Slovakia	0	0	1	0
Spain	795	172	1 566	99
Sweden	57	5	-	-
UK	792	-	-	-
Total	2 383	281	2 142	103

*Not reported

Description of the system

A subset of EU countries reports case-based severe influenza data to ECDC every week. Case definitions, populations under surveillance and data formats differ among these countries (Table 7). In order to make the data more comparable and pool them at EU level, only hospitalised, laboratory-confirmed influenza cases are included in the weekly data analysis and displayed in this report.

Table 7. Main characteristics of severe influenza surveillance systems

Country	Case definition	Population under surveillance	Type of surveillance	Data format
Finland	Lab-confirmed, hospitalised	ICU**	Comprehensive	Case-based
France	Lab-confirmed, hospitalised	ICU	Comprehensive	Case-based
Ireland	Lab-confirmed, hospitalised	All wards	Comprehensive	Case-based
Romania	SARI*, hospitalised	All wards	Sentinel	Case-based
Spain	Lab-confirmed, hospitalised	All wards	Sentinel	Case-based
Sweden	Lab-confirmed, hospitalised	ICU	Comprehensive	Case-based
United Kingdom	Lab-confirmed, hospitalised	ICU	Comprehensive	Aggregated

*Severe acute respiratory infection

**Intensive care unit

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 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 (Nacionalni inštitut za javno zdravje, Ljubljana), 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 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 Weekly Influenza Surveillance Overview 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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