SURVEILLANCE REPORT

Bi-weekly influenza surveillance overview

24 September 2010

Main surveillance developments in Weeks 36-37/2010 (06 Sep 2010 – 19 Sep 2010)

This first page contains the main developments in last two weeks and can be printed separately or together with the more detailed information following.

- Epidemiological indicators show no or sporadic influenza activity in the 17 reporting EU countries.
- A few influenza A and B viruses were detected in sentinel and non-sentinel specimens during weeks 36 and 37/2010.
- No SARI cases were reported during this period.

Sentinel surveillance of influenza-like illness (ILI)/acute respiratory infection (ARI): All 17 reporting countries experienced low influenza activity and no or sporadic geographic activity. In three countries (Bulgaria, Estonia and Hungary) increasing trends were observed. For more information, **click here.**

Virological surveillance: Sentinel physicians collected 166 respiratory specimens, two (1.2%) of which were positive for influenza virus; one for the 2009 pandemic influenza A(H1N1) virus and one for influenza B virus. For more information, **click here.**

Hospital surveillance of severe acute respiratory infection (SARI): During weeks 36–37/2010, no SARI cases were reported. For more information, **click here.**

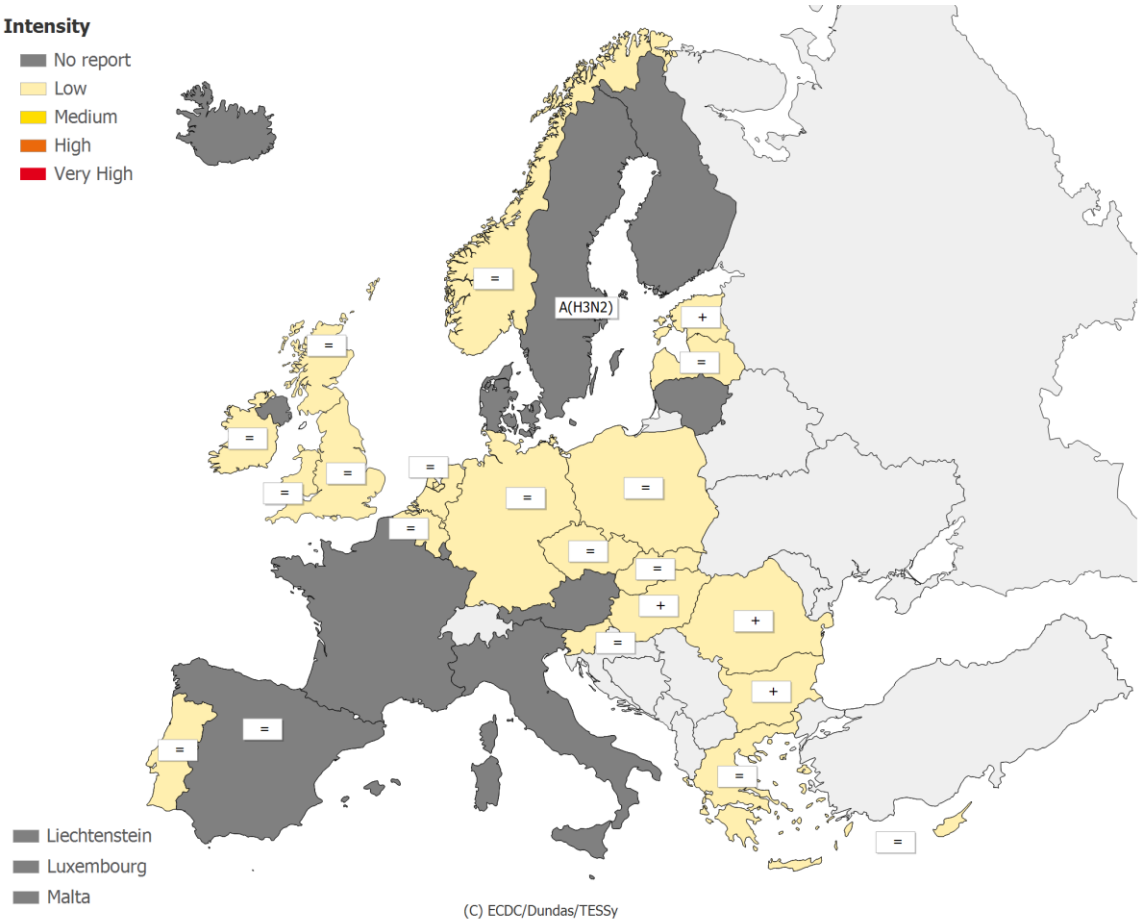
Sentinel surveillance (ILI/ARI)

Weekly analysis—epidemiology

During weeks 36–37/2010, 17 of 29 (59%) countries reported the intensity indicator. Since week 9/2010, all reporting countries have experienced low intensity (Map 1, Table1).

Geographic spread indicator was reported by 17 countries and the UK (England, Scotland and Wales). Cyprus and the UK (Scotland and Wales) reported sporadic ILI/ARI activity. The other 16 countries reported no activity (Map 2, Table 1). For the trend indicator, three countries (Bulgaria, Estonia and Hungary) observed an increasing trend from week 34 onwards, whilst all other countries reported a stable trend (Table 1).

Map 1: Intensity for weeks 36—37/2010

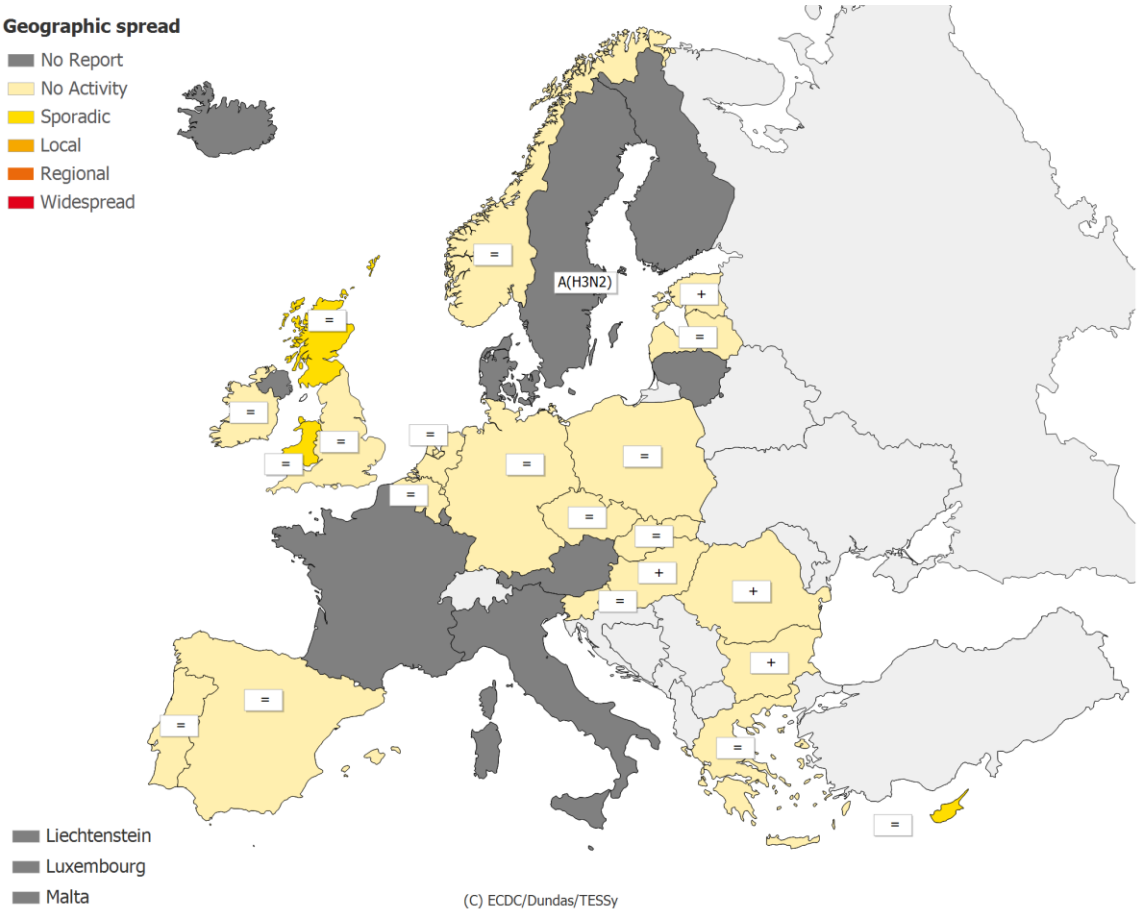


* A type/subtype is reported as dominant when > 40 % of all samples are positive for the type/subtype.

Legend:

Low	No influenza activity or influenza at baseline levels	-	Decreasing clinical activity
Medium	Usual levels of influenza activity	+	Increasing clinical activity
High	Higher than usual levels of influenza activity	=	Stable clinical activity
Very high	Particularly severe levels of influenza activity	**A(H3N2)**	Type A, Subtype H3N2

Map 2: Geographic spread for weeks 36—37/2010



* 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 activity	No evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic	Isolated cases of laboratory confirmed influenza infection
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)
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)

-	Decreasing clinical activity
+	Increasing clinical activity
=	Stable clinical activity
A(H3N2)	Type A, Subtype H3N2

Table 1: Epidemiological and virological overview by country

Country	Intensity	Geographic spread	Trend	No. of sentinel swabs	Dominant type	Percentage positive*	ILI per 100.000	ARI per 100.000	Epidemiological overview	Virological overview
Austria				0	None	-	-	-	Graphs	Graphs
Belgium	Low	No activity	Stable	48	None	0.0	38.8	1213.3	Graphs	Graphs
Bulgaria	Low	No activity	Increasing	0	None	-	-	266.3	Graphs	Graphs
Cyprus	Low	Sporadic	Stable	-	-	-	-*	-*	Graphs	Graphs
Czech Republic	Low	No activity	Stable	-	-	-	11.9	664.3	Graphs	Graphs
Denmark				0	None	-	-	-	Graphs	Graphs
Estonia	Low	No activity	Increasing	1	None	0.0	2.6	253.4	Graphs	Graphs
Finland				10	None	0.0	-	-	Graphs	Graphs
France				-	-	-	-	-		
Germany	Low	No activity	Stable	25	None	0.0	-	770.7	Graphs	Graphs
Greece	Low	No activity	Stable	0	None	-	27.1	-	Graphs	Graphs
Hungary	Low	No activity	Increasing	-	-	-	34.1	-	Graphs	Graphs
Iceland				-	-	-	-	-		
Ireland	Low	No activity	Stable	9	None	0.0	3.1	-	Graphs	Graphs
Italy				-	-	-	-	-		
Latvia	Low	No activity	Stable	0	None	-	0.0	780.5	Graphs	Graphs
Lithuania				-	-	-	-	-		
Luxembourg				-	-	-	-	-		
Malta				-	-	-	-	-		
Netherlands	Low	No activity	Stable	21	None	0.0	21.8	-	Graphs	Graphs
Norway	Low	No activity	Stable	0	None	-	21.0	-	Graphs	Graphs
Poland	Low	No activity	Stable	4	None	0.0	20.6	0.0	Graphs	Graphs
Portugal	Low	No activity	Stable	0	None	-	1.9	-	Graphs	Graphs
Romania	Low	No activity	Increasing	0	None	-	0.0	505.3	Graphs	Graphs
Slovakia	Low	No activity	Stable	0	None	-	73.3	985.4	Graphs	Graphs
Slovenia	Low	No activity	Stable	5	None	0.0	0.0	862.4	Graphs	Graphs
Spain	Unknown (no information available)	No activity	Stable	2	None	0.0	-	-	Graphs	Graphs
Sweden				0	AH3N2	-	-	-	Graphs	Graphs
UK - England	Low	No activity	Stable	26	None	6.7	3.5	265.8	Graphs	Graphs
UK - Northern Ireland				0	None	-	-	-	Graphs	Graphs
UK - Scotland	Low	Sporadic	Stable	15	None	16.7	2.4	198.5	Graphs	Graphs
UK - Wales	Low	Sporadic	Stable	-	-	-	2.1	-	Graphs	Graphs
Europe				166		1.2				Graphs

Note: Liechtenstein is not reporting to the European Influenza Surveillance Network

Description of the system

This surveillance is based on nationally organized sentinel networks of physicians, mostly general practitioners (GPs), covering at least 1–5% of the population in their countries. All EU/EEA Member States (except Liechtenstein) are participating. Depending on their country's choice, each sentinel physician reports the weekly number of patients seen with influenza-like illness (ILI), acute respiratory infection (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

During weeks 36 and 37/2010, 19 countries and the UK (England, Northern Ireland and Scotland) reported virological data. Table 2 shows the distribution of both sentinel and non-sentinel specimens by type and subtype. Sentinel physicians collected 166 specimens, of which one was positive for the 2009 pandemic influenza A(H1N1) virus and the other for influenza B virus. Four non-sentinel source specimens (e.g., specimens collected for diagnostic purposes in hospital settings) tested positive for influenza A, two for influenza A(H3) and for the other two samples subtyping was not performed (Table 2).

Cumulative data since week 40/2009 show that subtyping was performed on 16 232 type A influenza viruses detected in samples from sentinel practices. Of these, 99.6% (16 174) were identified as the 2009 pandemic A(H1N1) virus (Table 2). The proportion of positive sentinel samples has remained at low levels in Europe since week 07/2010.

An update from CNRL on influenza virus characterisation can be found here: Surveillance report (August 2010).

In summary, all 2009 pandemic A(H1N1) viruses received from EU countries have been antigenically similar and genetically closely related to the vaccine virus A/California/7/2009. In addition, most of the circulating influenza B viruses have been closely related to the 2009-2010 vaccine strain B/Brisbane/60/2008 (Victoria lineage; Table 3).

For details on the current virus strains recommended by WHO for vaccine preparation for 2010-2011 season click here.

Table 2: Weekly and cumulative influenza virus detections by type, subtype and surveillance system, weeks 40/2009–37/2010

	Current Period		Season	
Virus type/subtype	Sentinel	Non-sentinel	Sentinel	Non-sentinel
Influenza A	1	4	16914	90787
A (pandemic H1N1)	1	0	16174	79428
A (subtyping not performed)	0	2	682	11203
A (not subtypable)	0	0	14	50
A (H3)	0	2	8	55
A (H1)	0	0	36	51
Influenza B	1	0	196	478
Total Influenza	**2**	**4**	**17110**	**91265**

Note: A(pandemic H1N1), A(H3) and A(H1) includes both N-subtyped and not N-subtyped viruses

Table 3: Results of antigenic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40/2009–37/2010

Strain name	Number of strains
A(H1)v California/7/2009-like	3353
A(H3) A/Brisbane/10/2007 (H3N2)-like	9
A(H3) A/Perth/16/2009 (H3N2)-like	35
B/Brisbane/60/2008-like (B/Victoria/2/87 lineage)	19
B/Florida/4/2006-like (B/Yamagata/16/88 lineage)	5

Country comments

Finland, week 37: Five of the ten sentinel samples were adenovirus positive.

Description of the system

According to the nationally defined sampling strategy, sentinel physicians take nasal or pharyngeal swabs from patients with influenza-like illness (ILI), acute respiratory infection (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 on the current virus strains recommended by WHO for vaccine preparation click here.

Hospital surveillance – severe acute respiratory infection (SARI)

Weekly analysis—SARI

During weeks 36 and 37/2010, no SARI cases were reported to TESSy.

Since the beginning of SARI surveillance, eleven countries reported 11 461 cases and 576 related fatalities (Table 4). In cases where influenza virus was detected, 99.7% were 2009 pandemic A(H1N1) viruses (Table 5).

Table 4: Cumulative number of SARI cases, weeks 40/2009 - week 37/2010

Country	Number of cases	Incidence of SARI cases per 100,000 population	Number of fatal cases reported	Incidence of fatal cases per 100,000 population	Estimated population covered
Austria	2917		41		
Belgium	1749	16.39			10668666
Cyprus	26		9		
Finland	1422	26.7	56	1.05	5326314
France	1357		302		
United Kingdom	1639	4.15	65	0.16	39503332
Ireland	903		17		
Malta	216	52.22	1	0.24	413609
Netherlands	652	3.95	29	0.18	16521505
Romania	215	16.95	16	1.26	1268418
Slovakia	365		40		
Total	11461		576		73701844

Table 5: Number of SARI cases by influenza type and subtype, week 37/2010

Virus type/subtype	Cumulative number of cases since the start of the season
Influenza A	9184
A (pandemic H1N1)	9152
A(subtyping not performed)	25
A(H3)	
A(H1)	7
A(H5)	
Influenza B	
Unknown	2277
Total	11461

The report text was written by an editorial team at the European Centre for Disease Prevention and Control (ECDC): Flaviu Plata, Phillip Zucs, Bruno Ciancio, Rene Snacken and Eeva Broberg. The bulletin text was reviewed by the Community Network of Reference Laboratories for Human Influenza in Europe (CNRL) coordination team: Adam Meijer, Rod Daniels, John McCauley and Maria Zambon. On behalf of the EISN members the bulletin text was reviewed by Joan O'Donnell (Health Protection Surveillance Centre, Ireland) and Katarina Prosenc (National Institute of Public Health, Slovenia).