

SURVEILLANCE REPORT

Weekly influenza surveillance overview

26 November 2010

Main surveillance developments in week 46/2010 (15 – 21 Nov 2010)

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

- Almost all countries reporting to EISN continue to experience low consultation rates for influenza-like illness and acute respiratory infection.
- The very low proportion of sentinel clinical specimens testing positive for influenza virus (2.5%) supports the evidence from syndromic surveillance that there is currently very little influenza virus circulating in Europe.
- Almost 70% of influenza viruses detected since week 40/2010 have been type A, and 77% of the type A viruses subtyped were A(H1N1) 2009.
- At present, only one country (Romania) is reporting SARI cases, with nine cases in week 46/2010.
- Rare detections of influenza virus along with steadily increasing detections of respiratory syncytial virus in a number of European countries suggest that the low influenza-like illness and acute respiratory infection activity currently observed is likely due to other respiratory pathogens (including respiratory syncytial virus) rather than influenza virus.

Sentinel surveillance of influenza-like illness (ILI)/ acute respiratory infection (ARI): 22 of 24 reporting countries continued to observe low activity. For more information, [click here](#).

Virological surveillance: Sentinel physicians collected 485 specimens, 12 (2.5%) of which were positive for influenza virus. Of the 25 influenza viruses detected from sentinel and non-sentinel sources during week 46/2010, 15 (60%) were type A, and 10 (40%) were type B. For more information, [click here](#).

Hospital surveillance of severe acute respiratory infection (SARI): During week 46/2010, nine SARI cases were reported. For more information, [click here](#).

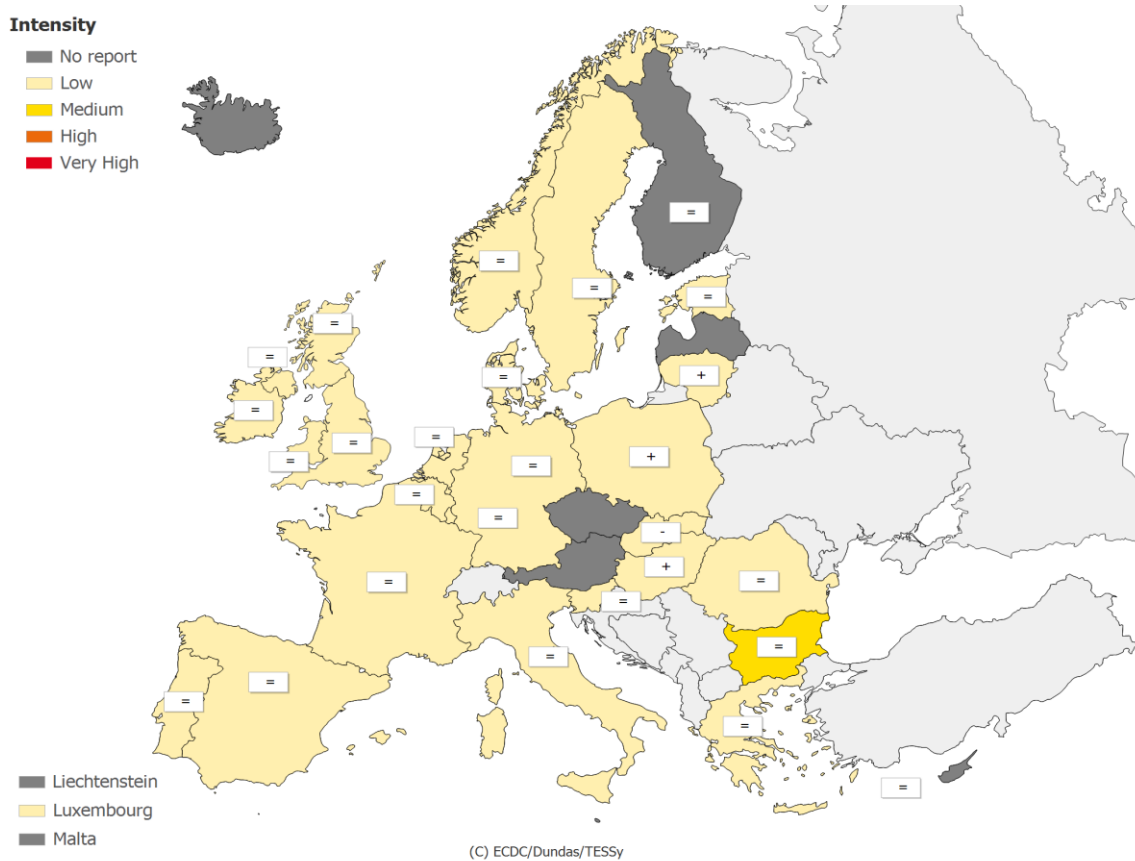
Sentinel surveillance (ILI/ARI)

Weekly analysis – epidemiology

During week 46/2010, 24 of 29 countries reported epidemiological data. Twenty-two observed low intensity, and Finland had insufficient information to make an estimate. Bulgaria remained the only country indicating medium intensity. Compared with the previous week, Hungary, Lithuania and Poland reported an increase in ILI/ARI consultation rates, with Hungary and Lithuania doing so for the second consecutive week. Slovakia reported a decrease while the remaining countries saw no change (Map 1, Table 1).

For the geographic spread indicator, the UK (Scotland) reported local activity, while Cyprus, France, Luxembourg, Norway, Portugal, Slovenia and the UK (England and Wales) reported sporadic activity. The remaining countries indicated no activity (Map 2).

Map 1: Intensity for week 46/2010



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

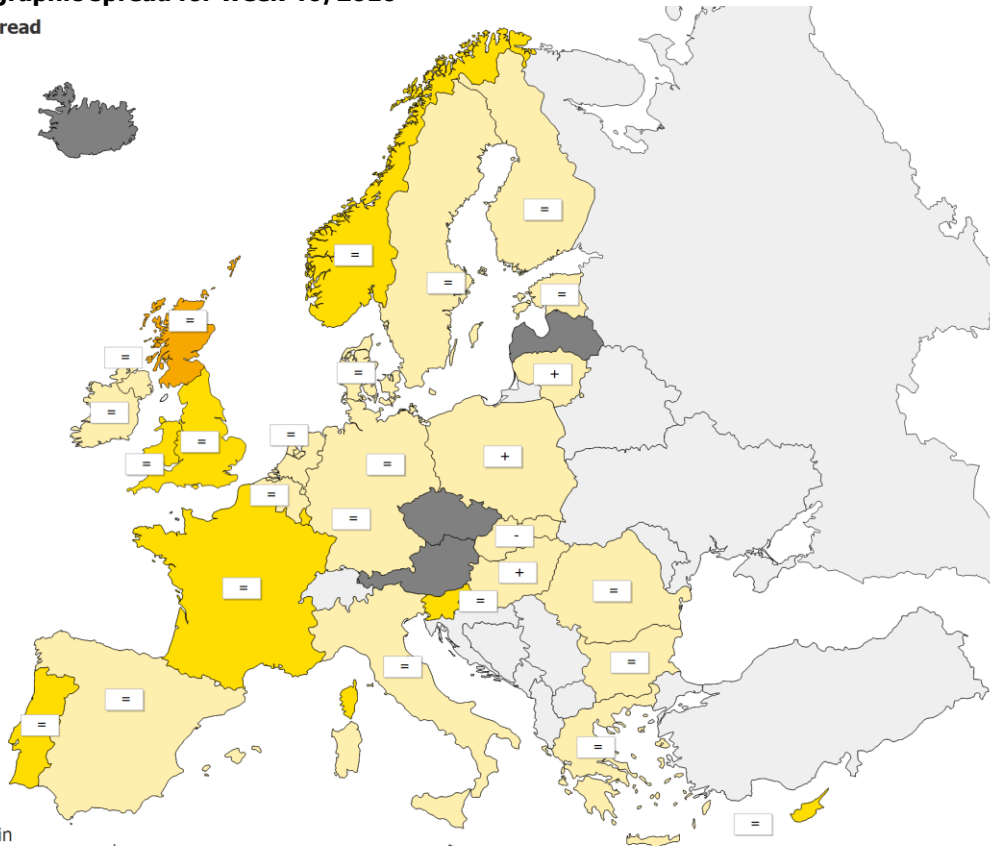
Legend:

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		

Map 2: Geographic spread for week 46/2010

Geographic spread

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



(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 activity	No evidence of influenza virus activity (clinical activity remains at baseline levels)	-	Decreasing clinical activity
Sporadic	Isolated cases of laboratory confirmed influenza infection	+	Increasing 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)	=	Stable clinical activity
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 46/2010

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	0.0	-	-	Graphs	Graphs
Belgium	Low	No activity	Stable	19	None	5.3	31.5	855.6	Graphs	Graphs
Bulgaria	Medium	No activity	Stable	-	None	0.0	-	900.7	Graphs	Graphs
Cyprus		Sporadic	Stable	-	-	0.0	-*	-*	Graphs	Graphs
Czech Republic				-	-	0.0	-	-		
Denmark	Low	No activity	Stable	7	None	14.3	58.4	-	Graphs	Graphs
Estonia	Low	No activity	Stable	10	None	0.0	4.7	276.9	Graphs	Graphs
Finland	Unknown (no information available)	No activity	Stable	24	None	0.0	-	-	Graphs	Graphs
France	Low	Sporadic	Stable	41	None	0.0	-	1357.2	Graphs	Graphs
Germany	Low	No activity	Stable	21	None	0.0	-	873.0	Graphs	Graphs
Greece	Low	No activity	Stable	1	None	0.0	58.6	-	Graphs	Graphs
Hungary	Low	No activity	Increasing	41	None	0.0	80.3	-	Graphs	Graphs
Iceland				-	-	0.0	-	-		
Ireland	Low	No activity	Stable	13	None	0.0	9.4	-	Graphs	Graphs
Italy	Low	No activity	Stable	-	-	0.0	90.7	-	Graphs	Graphs
Latvia				0	None	0.0	-	-	Graphs	Graphs
Lithuania	Low	No activity	Increasing	-	-	0.0	0.5	426.8	Graphs	Graphs
Luxembourg	Low	Sporadic	Stable	3	None	33.3	-*	-*	Graphs	Graphs
Malta				-	-	0.0	-	-		
Netherlands	Low	No activity	Stable	5	None	0.0	19.0	-	Graphs	Graphs
Norway	Low	Sporadic	Stable	5	None	0.0	28.5	-	Graphs	Graphs
Poland	Low	No activity	Increasing	14	None	0.0	50.1	-	Graphs	Graphs
Portugal	Low	Sporadic	Stable	1	None	0.0	15.2	-	Graphs	Graphs
Romania	Low	No activity	Stable	28	None	0.0	14.4	712.2	Graphs	Graphs
Slovakia	Low	No activity	Decreasing	0	None	0.0	142.7	1320.3	Graphs	Graphs
Slovenia	Low	Sporadic	Stable	6	None	0.0	0.0	855.3	Graphs	Graphs
Spain	Low	No activity	Stable	86	None	2.3	17.6	-	Graphs	Graphs
Sweden	Low	No activity	Stable	23	None	0.0	5.0	-	Graphs	Graphs
UK - England	Low	Sporadic	Stable	111	None	4.5	8.3	414.1	Graphs	Graphs
UK - Northern Ireland	Low	No activity	Stable	8	None	0.0	18.9	335.3	Graphs	Graphs
UK - Scotland	Low	Local	Stable	18	-	11.1	1.0	281.8	Graphs	Graphs
UK - Wales	Low	Sporadic	Stable	-	-	0.0	8.1	-	Graphs	Graphs
Europe				485		2.5				Graphs

*Incidence per 100 000 is not calculated for these countries as no population denominator is provided.
 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

In week 46/2010, 24 countries reported virological data. Sentinel physicians collected 485 specimens, 12 (2.5%) of which were positive for influenza virus (Tables 1 and 2). In addition, 13 non-sentinel source specimens (i.e., specimens collected for diagnostic purpose in hospitals) were reported positive for influenza virus. Of the 25 influenza viruses detected from sentinel and non-sentinel sources during week 46/2010, 15 (60%) were type A, and 10 (40%) were type B; the latter being mainly reported by Spain and the UK (England). Nine of the 15 influenza A viruses detected in week 46/2010 were subtyped: eight (89%) as A(H1N1) 2009 virus and one as A(H3).

Since week 40/2010, sentinel and non-sentinel specimens yielded 192 influenza detections, of which 133 (69%) were type A, and 59 (31%) were type B. Eighty-four of these influenza A viruses were subtyped: 65 (77%) as A(H1N1)2009 virus and 19 (23%) as A(H3).

Table 2 shows the distribution of both sentinel and non-sentinel specimens by type and subtype. Figures 1–3 show the trends of virological detections since week 40/2010.

From week 40 to week 46/2010, 29 influenza viruses from sentinel and non-sentinel specimens were characterised antigenically (Table 3): 17 as A/California/7/2009 (H1N1)-like; four as A/Perth/16/2009 (H3N2)-like; seven as B/Brisbane/60/2008-like (Victoria lineage); and one as B/Florida/4/2006-like (Yamagata lineage).

More details on circulating viruses can be found in the [report](#) prepared by the Community Network of Reference Laboratories coordination team.

In week 46/2010, respiratory syncytial virus detections increased for the sixth consecutive week, with 13 countries reporting 289 detections (Figure 4).

Table 2: Weekly and cumulative influenza virus detections by type, subtype and surveillance system, weeks 40/2010–46/2010

Virus type/subtype	Current Period		Season		
	Sentinel	Non-sentinel	Sentinel	Non-sentinel	
Influenza A		5	10	51	82
A (pandemic H1N1)		5	3	36	29
A (subtyping not performed)		0	6	3	46
A (not subtypable)		0	0	0	0
A (H3)		0	1	12	7
A (H1)		0	0	0	0
Influenza B		7	3	29	30
Total Influenza		12	13	80	112

Note: A(pandemic H1) 2009, A(H3) and A(H1) include both N-subtyped and not N-subtyped viruses.

Figure 1: Number of sentinel specimens positive for influenza, by type, subtype and by week of report, weeks 40/2010–46/2010

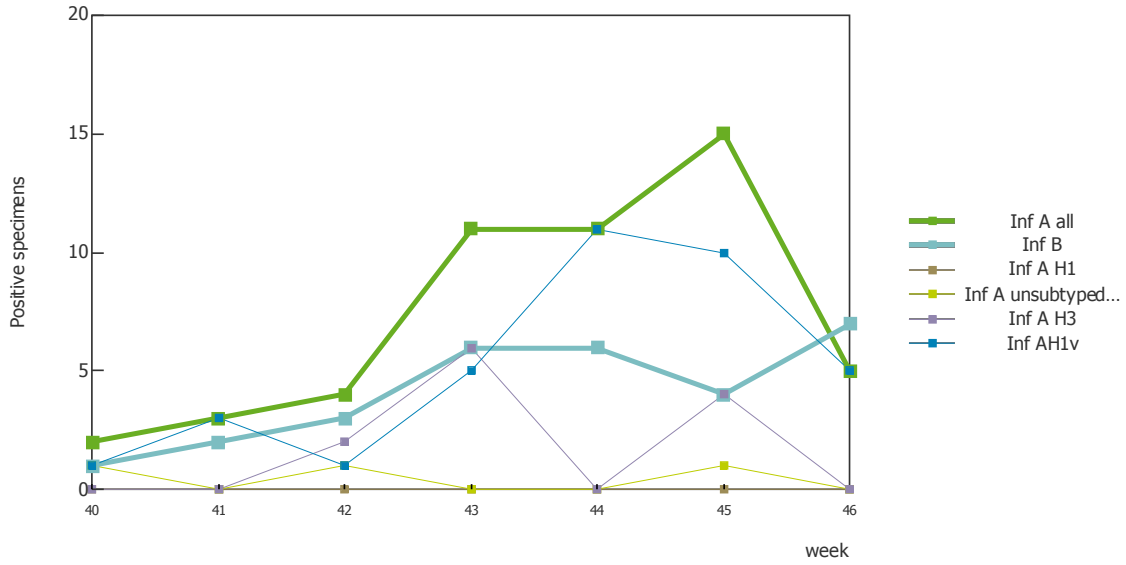


Figure 2: Number of non-sentinel specimens positive for influenza by type, subtype and week of report, weeks 40/2010–46/2010

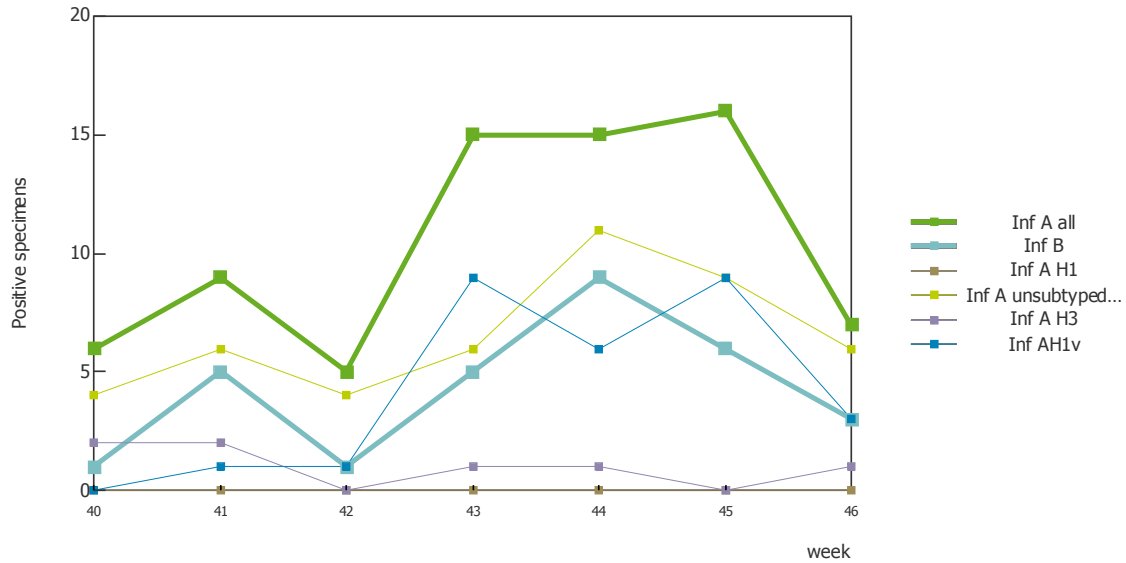


Figure 3: Proportion of sentinel samples positive for influenza, weeks 40/2010–46/2010

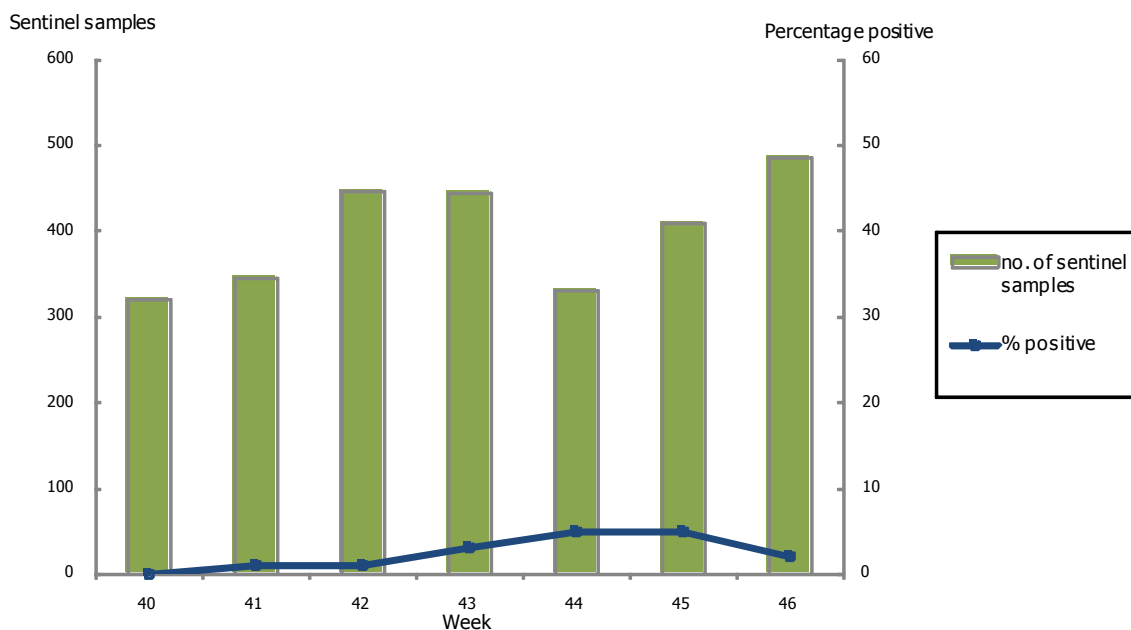
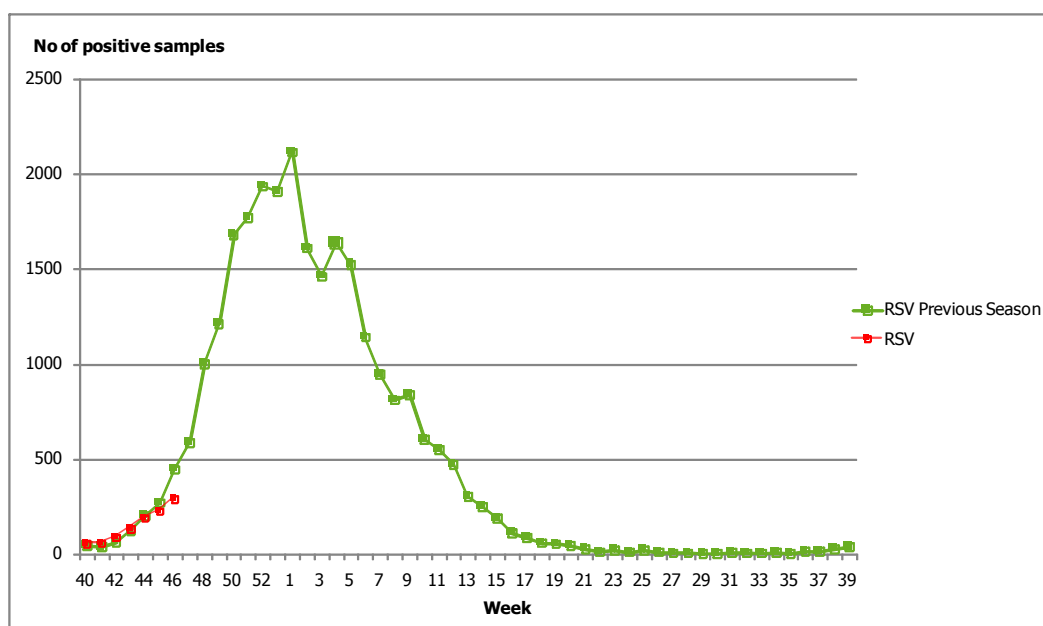


Table 3: Results of antigenic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40/2010–46/2010

Strain name	Number of strains
A(H1)v California/7/2009-like	17
A(H3) A/Brisbane/10/2007 (H3N2)-like	0
A(H3) A/Perth/16/2009 (H3N2)-like	4
B/Brisbane/60/2008-like (B/Victoria/2/87 lineage)	7
B/Florida/4/2006-like (B/Yamagata/16/88 lineage)	1

Figure 4: Respiratory syncytial virus detections, sentinel and non-sentinel, weeks 40/2010–46/2010



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

Hospital surveillance – severe acute respiratory infection (SARI)

Weekly analysis – SARI

During week 46/2010, nine SARI cases were reported. Since week 40/2010, a total of 27 SARI cases have been reported, all in Romania, representing a notification rate of 0.4 per 100000 population. Figure 5 displays the number of cases by week of onset.

Six of the nine cases reported for week 46/2010 were male, five of them less than two years old (Table 4). All cases presented with acute respiratory distress syndrome, but it is unknown if any of them were due to influenza (Table 5). One of the nine cases had previously been vaccinated against the pandemic A(H1N1) 2009 virus. Three elderly patients and one of the infants had underlying conditions.

Five cases, one having an underlying condition, were admitted to intensive care.

Figure 5: Number of SARI cases by week of onset, weeks 40/2009 - week 46/2010

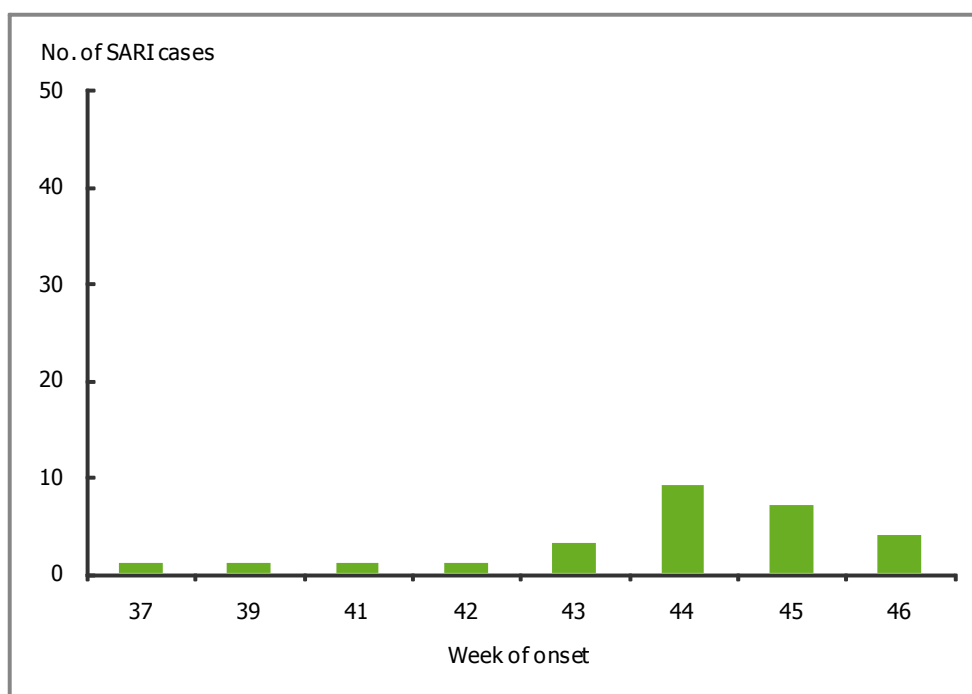


Table 4: Number of SARI cases by age and gender, week 46/2010

Age groups	Male	Female
Under 2	5	
2-17		1
>=60	1	2
Total	6	3

Table 5: Number of SARI cases by influenza type and subtype, week 46/2010

Virus type/subtype	Number of cases during current week	Cumulative number of cases since the start of the season
Influenza A		
A (pandemic H1N1)		
A(subtyping not performed)		
A(H3)		
A(H1)		
A(H5)		
Influenza B		
Unknown	9	27
Total	9	27

Note: A(pandemic H1) 2009, A(H3) and A(H1) include both N-subtyped and not N-subtyped viruses.

The report text was written by an editorial team at the European Centre for Disease Prevention and Control (ECDC): Eeva Broberg, Flaviu Plata, Phillip Zucs and René Snacken. 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 Bianca Snijders (RIVM Bilthoven, The Netherlands) and Thedi Ziegler (National Institute for Health and Welfare, Finland)

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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 numbers in the database.

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