



SURVEILLANCE REPORT

Weekly influenza surveillance overview

3 December 2010

Main surveillance developments in week 47/2010 (22 Nov 2010 – 28 Nov 2010)

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

- During week 47/2010, all reporting countries experienced low intensity influenza activity. Compared with the previous week, a greater number of countries (12 in week 47, six in week 46), reported sporadic activity. Malta reported local activity.
- Since week 40/2010, of the 359 typed influenza viruses, 63% were type A and 37% were type B. Of the sub-typed influenza A viruses, 75% were A(H1N1) 2009.
- The number of detected respiratory syncytial virus infections continued to show steady increase.
- Since week 37/2010, Romania has reported 35 SARI cases, none of which were related to influenza.

Sentinel surveillance of influenza-like illness (ILI)/ acute respiratory infection (ARI): All reporting countries experienced low intensity influenza activity but, in comparison with the previous week, more countries reported sporadic activity. For more information, [click here](#).

Virological surveillance: In week 47/2010, sentinel physicians collected 604 specimens of which 5.1% were positive for influenza. Of the 359 influenza detections in sentinel and non-sentinel specimens, 63% were influenza A and 37% influenza B viruses. Of 130 sub-typed influenza A viruses, 74.6% were A(H1N1) 2009, 24.6% were A(H3) and 0.8% was A(H1) virus. For more information, [click here](#).

Hospital surveillance of severe acute respiratory infection (SARI): Since week 37/2010, 35 SARI cases have been reported by Romania, eight of which occurred during week 47/2010. For more information, [click here](#).

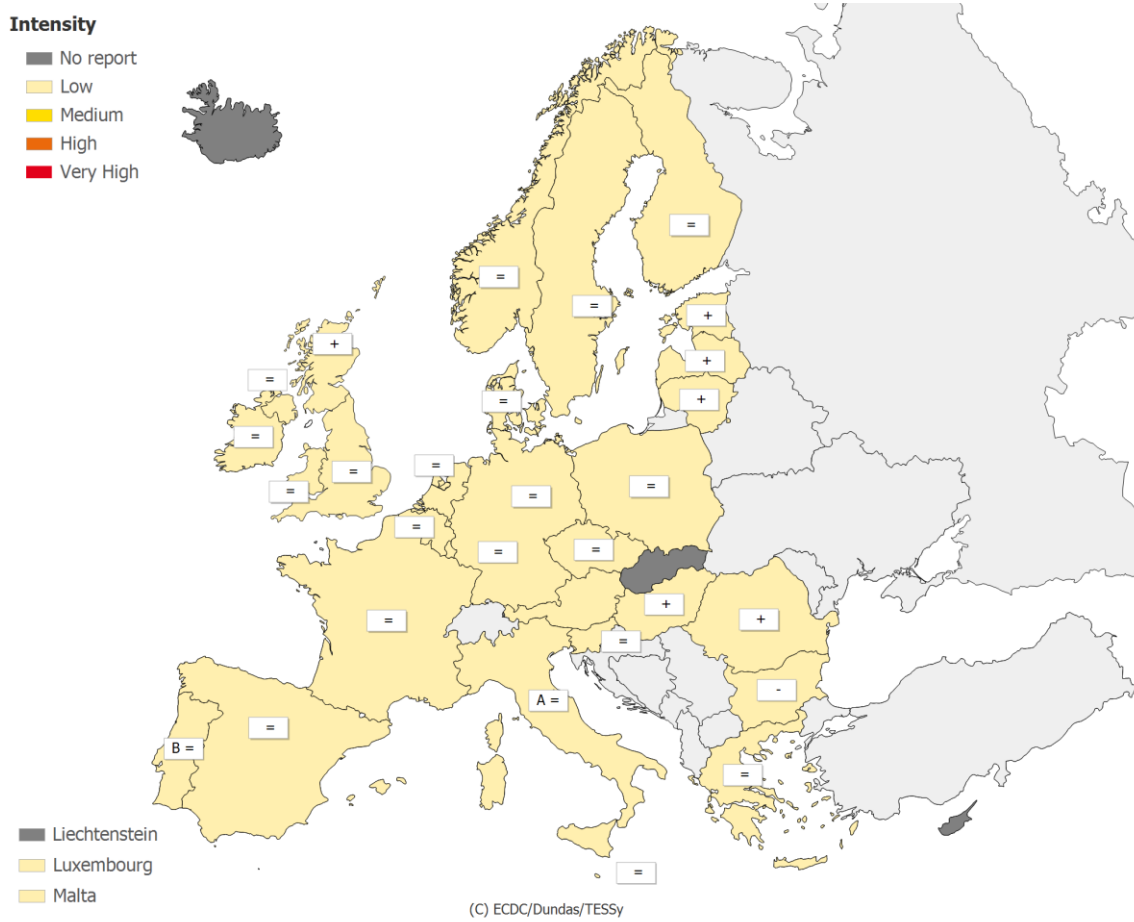
Sentinel surveillance (ILI/ARI)

Weekly analysis – epidemiology

During week 47/2010, 24 of 29 countries reported epidemiological data. All reporting countries experienced low intensity influenza activity (Table 1 and map 1).

In comparison with the previous week, more sporadic activity was reported: 12 countries, including the UK (England, Scotland, Wales), reported sporadic activity and Malta reported local activity. No activity was reported by 13 countries and the UK (Northern Ireland) (Table 1 and Map 2). Five countries and the UK (Scotland) reported an increasing trend for clinical activity (Table 1, Map 2).

Map 1: Intensity for week 47/2010

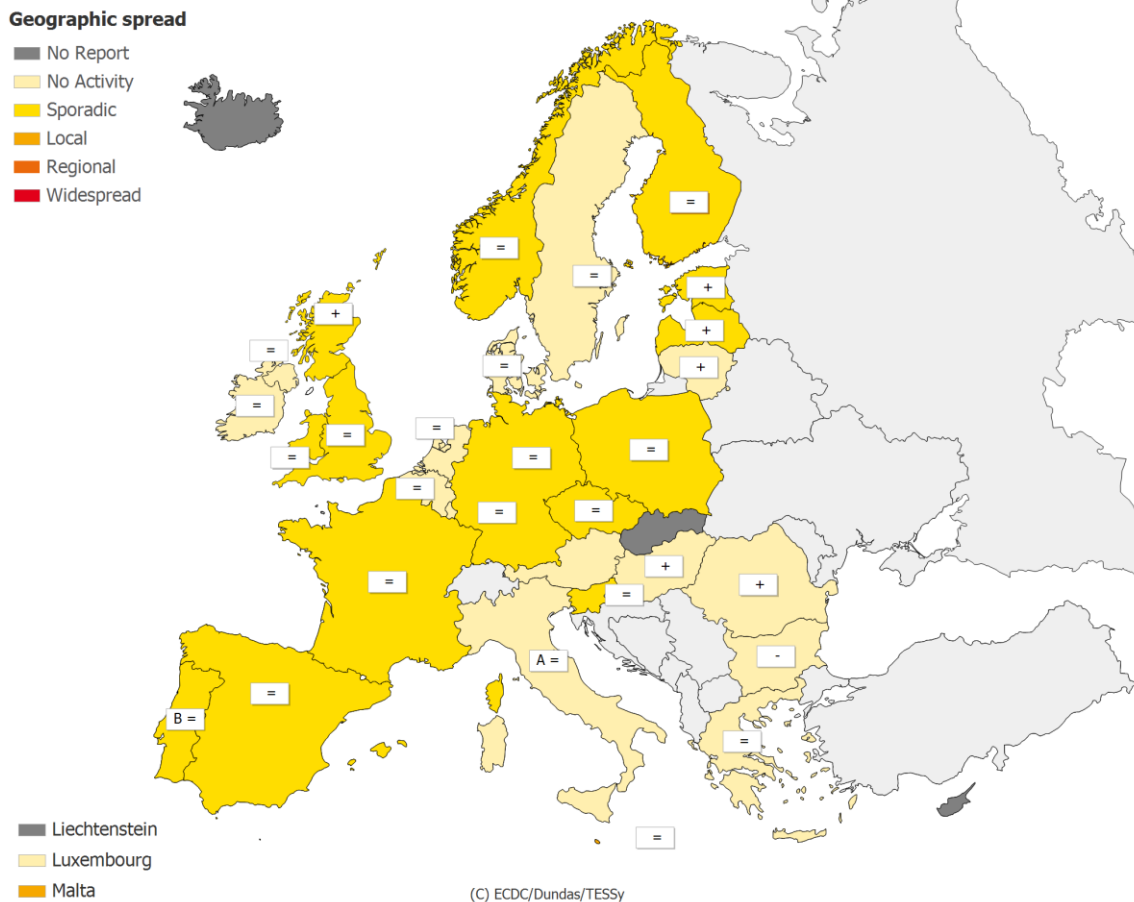


* A type/subtype is reported as dominant when > 40 % of all samples are positive for the type/subtype.

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	Type A
		B	Type B

Map 2: Geographic spread for week 47/2010



* 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)	-	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)	A	Type A
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)	B	Type B

Table 1: Epidemiological and virological overview by country, week 47/2010

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	Low	No activity	Unknown (no information available)	3	None	0.0	-	22.6	Graphs	Graphs
Belgium	Low	No activity	Stable	14	None	7.1	36.4	1106.6	Graphs	Graphs
Bulgaria	Low	No activity	Decreasing	0	None	0.0	-	889.4	Graphs	Graphs
Cyprus				-	-	0.0	-	-		
Czech Republic	Low	Sporadic	Stable	15	None	0.0	26.4	949.8	Graphs	Graphs
Denmark	Low	No activity	Stable	5	None	0.0	62.9	-	Graphs	Graphs
Estonia	Low	Sporadic	Increasing	14	None	7.1	5.1	304.4	Graphs	Graphs
Finland	Low	Sporadic	Stable	12	None	8.3	-	-	Graphs	Graphs
France	Low	Sporadic	Stable	64	None	6.3	-	1566.3	Graphs	Graphs
Germany	Low	Sporadic	Stable	36	None	5.6	-	975.0	Graphs	Graphs
Greece	Low	No activity	Stable	1	-	0.0	84.4	-	Graphs	Graphs
Hungary	Low	No activity	Increasing	42	None	0.0	85.9	-	Graphs	Graphs
Iceland				-	-	0.0	-	-		
Ireland	Low	No activity	Stable	12	None	8.3	6.7	-	Graphs	Graphs
Italy	Low	No activity	Stable	19	A	5.3	110.3	-	Graphs	Graphs
Latvia	Low	Sporadic	Increasing	-	-	0.0	0.9	967.3	Graphs	Graphs
Lithuania	Low	No activity	Increasing	-	-	0.0	0.7	473.0	Graphs	Graphs
Luxembourg	Low	No activity	Stable	1	None	0.0	-*	-*	Graphs	Graphs
Malta	Low	Local	Stable	-	-	0.0	-*	-*	Graphs	Graphs
Netherlands	Low	No activity	Stable	13	None	7.7	31.9	-	Graphs	Graphs
Norway	Low	Sporadic	Stable	4	None	0.0	29.7	-	Graphs	Graphs
Poland	Low	Sporadic	Stable	18	None	0.0	43.1	-	Graphs	Graphs
Portugal	Low	Sporadic	Stable	6	B	50.0	9.7	-	Graphs	Graphs
Romania	Low	No activity	Increasing	47	None	0.0	16.6	785.8	Graphs	Graphs
Slovakia				5	None	0.0	-	-	Graphs	Graphs
Slovenia	Low	Sporadic	Stable	7	None	0.0	0.0	969.7	Graphs	Graphs
Spain	Low	Sporadic	Stable	99	None	3.0	20.1	-	Graphs	Graphs
Sweden	Low	No activity	Stable	12	None	0.0	4.3	-	Graphs	Graphs
UK - England	Low	Sporadic	Stable	123	None	9.8	11.8	462.4	Graphs	Graphs
UK - Northern Ireland	Low	No activity	Stable	7	None	0.0	25.4	341.1	Graphs	Graphs
UK - Scotland	Low	Sporadic	Increasing	25	None	4.0	2.1	287.0	Graphs	Graphs
UK - Wales	Low	Sporadic	Stable	-	-	0.0	7.7	-	Graphs	Graphs
Europe				604		5.1				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 47/2010, 23 countries and the UK (England, Northern Ireland and Scotland) reported virological data.

Sentinel physicians collected 604 specimens, 31 (5.1%) of which were positive for influenza virus (Tables 1 and 2). In addition, 93 non-sentinel source specimens (i.e., specimens collected for diagnostic purpose in hospitals) were reported positive for influenza virus. Of the 124 influenza viruses detected during week 47/2010, 68 (55%) were type A and 56 (45%) were type B. Of the 31 influenza A viruses sub-typed, 26 (84%) were A(H1N1) 2009 and five (16%) were A(H3) (Table 2).

Since week 40/2010, of the 359 influenza detections in sentinel and non-sentinel specimens, 226 (63%) were influenza A and 133 (37%) influenza B viruses. Additionally, of the 130 influenza A viruses have been sub-typed, 97 (74.6%) were A(H1N1) 2009, 32 (24.6%) were A(H3) and one (0.8%) was A(H1) virus (Table 2). Figures 1–3 show the trends of virological detections since week 40/2010. The percentage of positive sentinel swabs remained at a low level (5.1%, Figure 3).

Since week 40/2010, 39 influenza viruses from sentinel and non-sentinel specimens have been characterised antigenically (Table 3): 21 as A/California/7/2009 (H1N1)-like, seven as A(H3)/Perth/16/2009 (H3N2)-like, 10 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 47/2010, respiratory syncytial virus detections increased for the eighth consecutive week, with 12 countries reporting 661 detections (Figure 4).

Table 2: Weekly and cumulative influenza virus detections by type, subtype and surveillance system, weeks 40/2010–47/2010

Virus type/subtype	Current Period		Season	
	Sentinel	Non-sentinel	Sentinel	Non-sentinel
Influenza A	15	53	75	151
A (pandemic H1N1)	14	12	53	44
A (subtyping not performed)	0	37	5	91
A (not subtypable)	0	0	0	0
A (H3)	1	4	16	16
A (H1)	0	0	1	0
Influenza B	16	40	56	77
Total Influenza	31	93	131	228

Note: A(pandemic H1), A(H3) and A(H1) includes 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 40/2010–47/2010

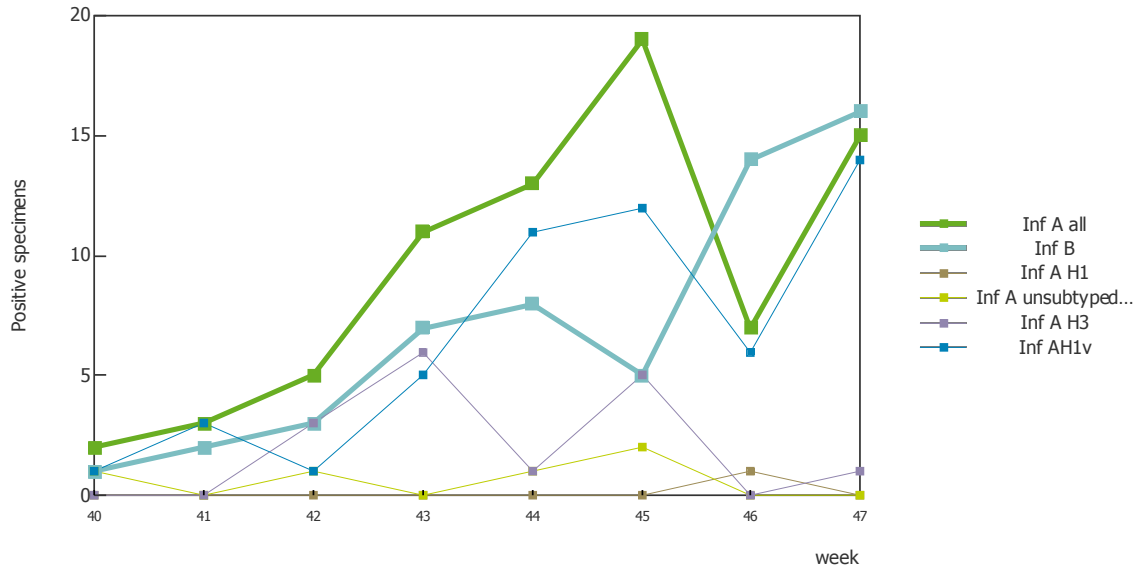


Figure 2: Number of non-sentinel specimens positive for influenza by type, subtype and week of report, weeks 40/2010–47/2010

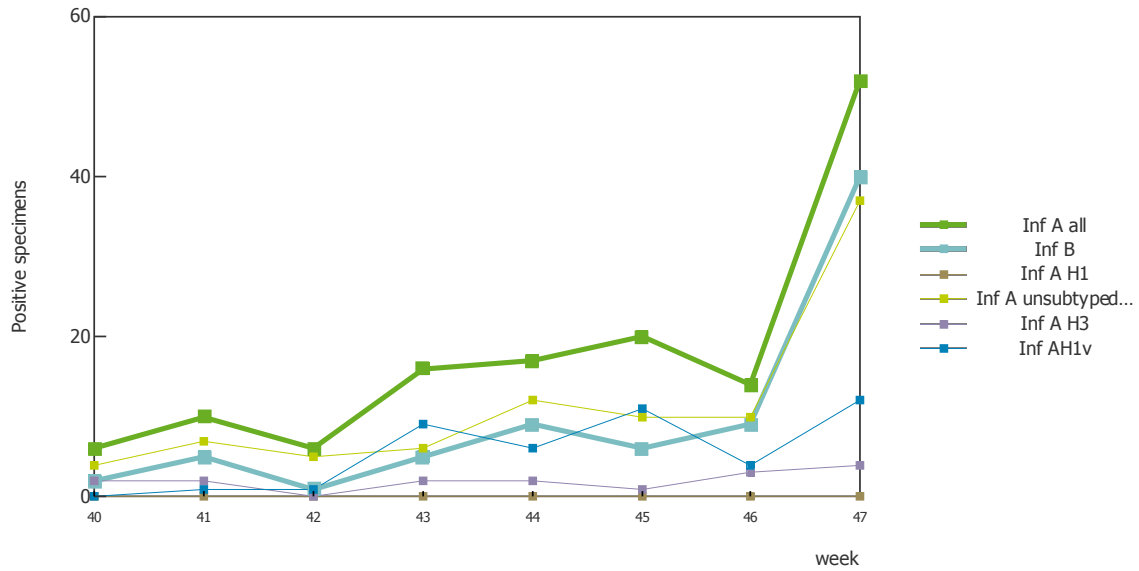


Figure 3: Proportion of sentinel samples positive for influenza, weeks 40/2010–47/2010

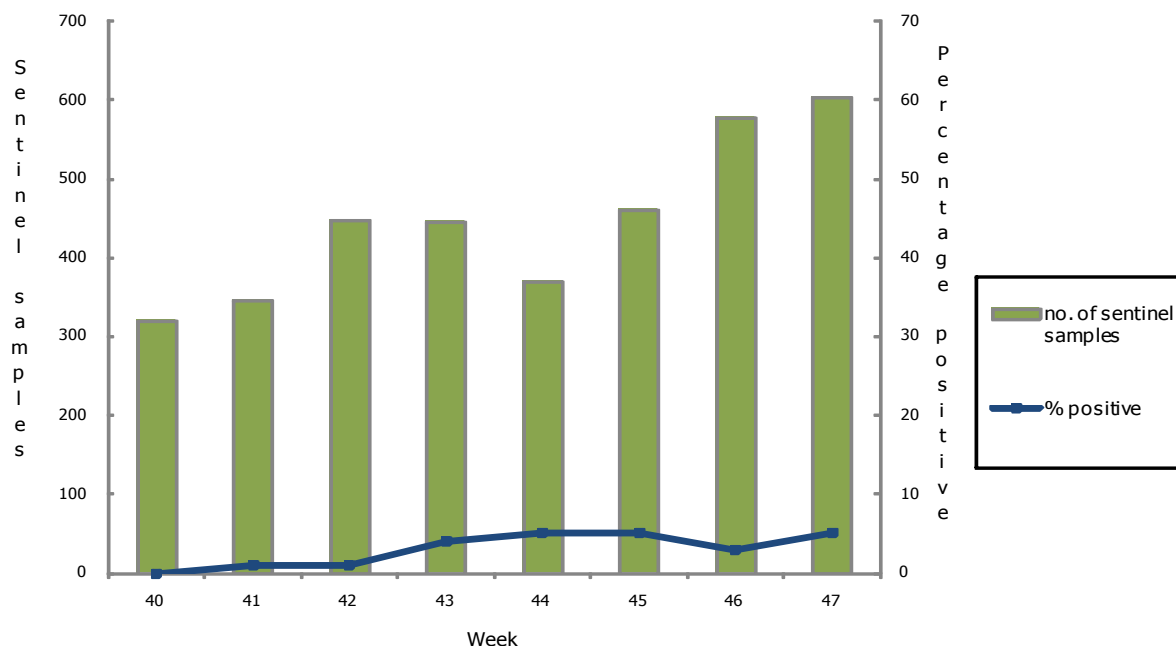
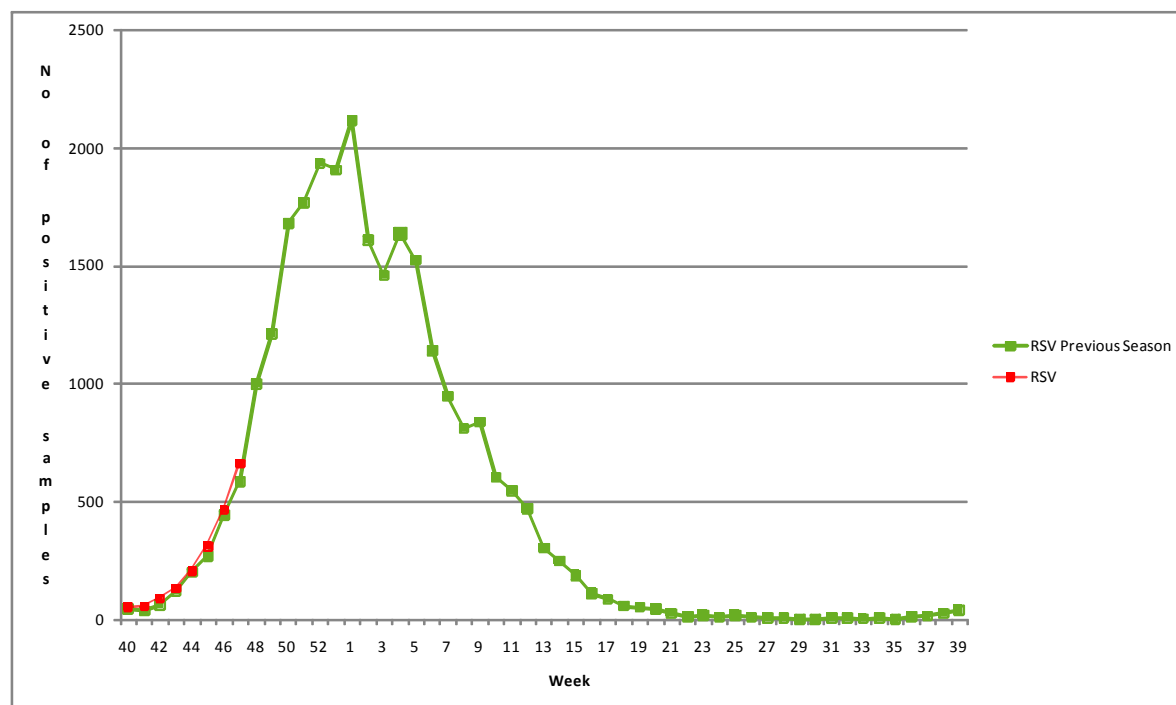


Table 3: Results of antigenic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40/2010–47/2010

Strain name	Number of strains
A(H1)v California/7/2009-like	21
A(H3) A/Brisbane/10/2007 (H3N2)-like	0
A(H3) A/Perth/16/2009 (H3N2)-like	7
B/Brisbane/60/2008-like (B/Victoria/2/87 lineage)	10
B/Florida/4/2006-like (B/Yamagata/16/88 lineage)	1

Figure 4: Respiratory syncytial virus detections, sentinel and non-sentinel, weeks 40/2010–47/2010



Country comments

The Netherlands: Since week 40/2010, four influenza B viruses and no influenza A viruses were detected in sentinel specimens. For two of the influenza B viruses, the lineage could be identified by PCR assay. Both were Victoria-like. In addition, the National Influenza Centre has so far received one influenza B virus and two influenza A(H1N1) 2009 viruses from non-sentinel sources.

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

Since week 37/2010, Romania—which is the only country that has provided reports on SARI cases so far—has reported 35 cases representing a notification rate of 0.55 cases/10⁵ inhabitants. During week 47/2010, eight SARI cases were reported, none of which were related to influenza infection.

Seven of the eight reported cases for week 47/2010 were in males, and six were in infants < 2 years old. Only one was vaccinated with the seasonal vaccine. All eight SARI cases needed oxygen support, with two being admitted to ICU. Of the six patients with available information, only one had a chronic lung disease (Tables 4–10).

As a complication, acute respiratory distress syndrome was observed in seven cases, of which five were infants <2 years old (Table 11).

Table 4: Cumulative number of SARI cases, week 40/2010–week 47/2010

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
Romania	35	0.55			6413821
Total	35		0		6413821

Figure 5: Number of SARI cases by week of onset, week 40/2010–week 47/2010

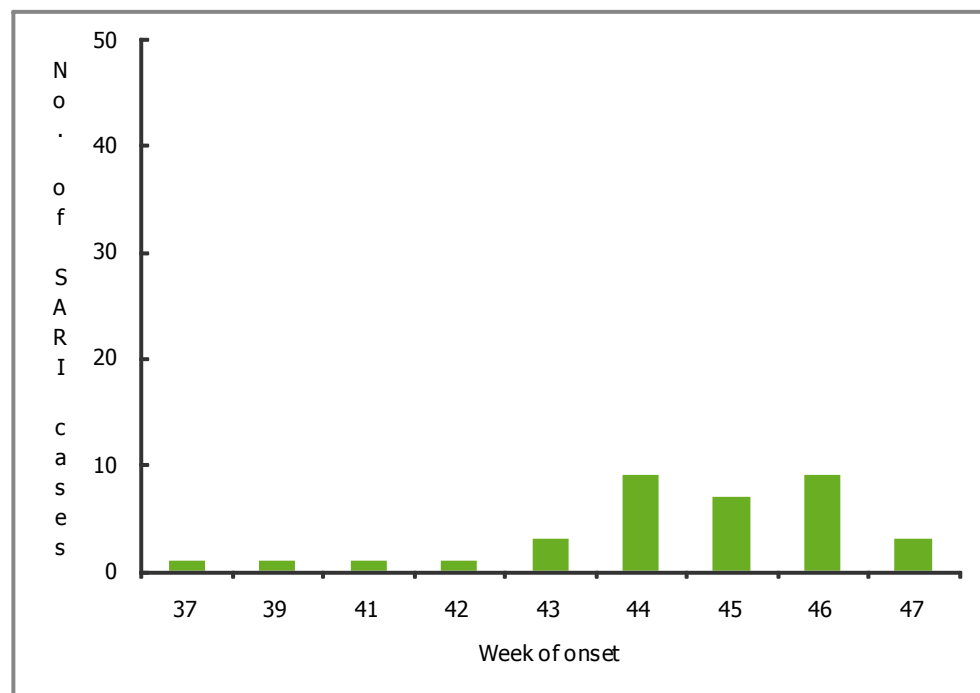


Table 5: Number of SARI cases by age and gender, week 47/2010

Age groups	Male	Female	Other (e.g., transsexual)	Unknown
Under 2	5	1		
2-17	1			
18-44	1			
Total	7	1		

Table 6: Number of SARI cases by influenza type and subtype, week 47/2010

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	8	35
Total	8	35

Table 7: Number of SARI cases by antiviral treatment, week 47/2010

Antiviral treatment	Number of patients who received prophylaxis	Number of patients who received anti-viral treatment
None	8	8
Total	8	8

Table 8: Number of SARI cases by level of care and respiratory support, week 47/2010

Respiratory support	ICU	Inpatient ward	Other	Unknown
Oxygen therapy	2	6		

Table 9: Number of SARI cases by vaccination status, week 47/2010

Vaccination Status	Number Of Cases	Percentage of cases
Not full pandemic vaccination	0	0
Not vaccinated	7	88
Seasonal vaccination	1	12.5
TOTAL	8	

Table 10: Number of underlying conditions in SARI cases by age group, week 47/2010

Underlying condition/risk factor	Infant below 2 years	2-17 years	18-44 years	45-59 years	>=60 years
Chronic lung disease	1				
No underlying condition	5	1	1		

Table 11: Additional clinical complications in SARI cases by age group, week 47/2010

Additional clinical complications	Infant below 2 years	2-17 years	18-44 years	45-59 years	>=60 years
Acute respiratory distress syndrome	5	1	1		
None	1				

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)

Maps and commentary used in this Weekly Influenza Surveillance Overview (WISO) do not imply any opinions whatsoever of ECDC or its partners on the legal status of the countries and territories shown or concerning their borders.

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.

© European Centre for Disease Prevention and Control, Stockholm, 2010