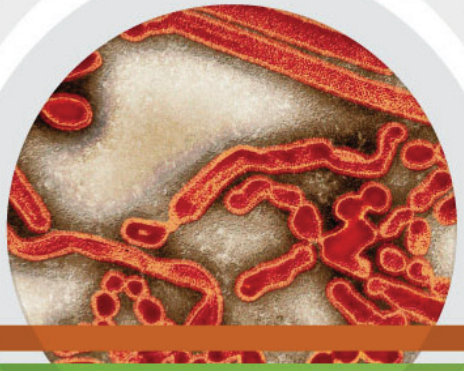


SURVEILLANCE REPORT

Weekly influenza surveillance overview

9 December 2011

Main surveillance developments in week 48/2011 (28 November – 4 December 2011)

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

- During week 48/2011, low influenza activity was notified by all 28 countries reporting.
- Of 605 sentinel specimens tested, nine were positive for influenza viruses (1.5%). Of the 54 influenza virus detections in sentinel specimens since week 40/2011, 39 were type A and 15 were type B viruses. Of 28 influenza A viruses sub-typed, four were A(H1)pdm09 and 24 were A(H3) viruses.
- Since week 40/2011, 61 SARI cases have been reported. Eighteen of them were confirmed influenza cases.
- Nine weeks after the beginning of the surveillance season for influenza in the Northern Hemisphere, there has been no evidence of sustained transmission in EU/EAA countries.

Sentinel surveillance of influenza-like illness (ILI)/ acute respiratory infection (ARI): Influenza activity of low-intensity was reported by all 28 countries with the Netherlands reporting local spread. For more information, **click here**.

Virological surveillance: The low proportion of sentinel specimens testing positive for influenza viruses (1.5%) suggests that there is currently little influenza virus circulation in Europe. For more information, **click here**.

Hospital surveillance of severe acute respiratory infection (SARI): Since week 40/2011, 61 SARI cases have been reported by four countries, 18 of which were related to influenza infection. For more information, **click here**.

Sentinel surveillance (ILI/ARI)

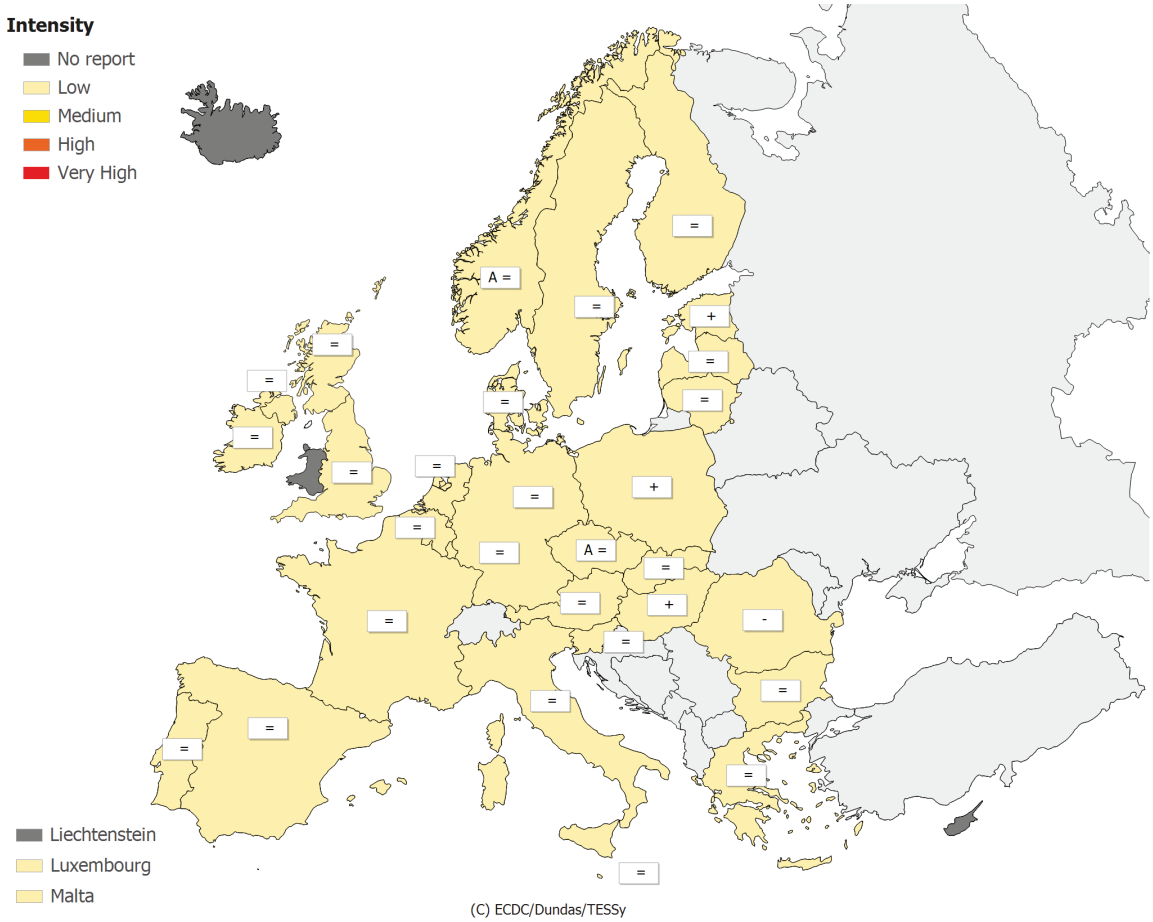
Weekly analysis – epidemiology

During week 48/2011, all 27 countries reporting and the UK (England, Northern Ireland and Scotland) experienced low-intensity influenza activity (Table 1, Map 1).

Only the Netherlands reported local spread. Sporadic activity was reported by the Czech Republic, France, Norway, Spain and Sweden. No geographic spread was reported by 20 countries and the UK (England, Northern Ireland and Scotland) (Table 1, Map 2).

Stable trends were reported by 22 countries and the UK (England, Northern Ireland and Scotland). Increasing trends were reported by Estonia, Hungary and Poland, while decreasing trends were reported by Romania (Table 1, Map 2).

Map 1: Intensity for week 48/2011

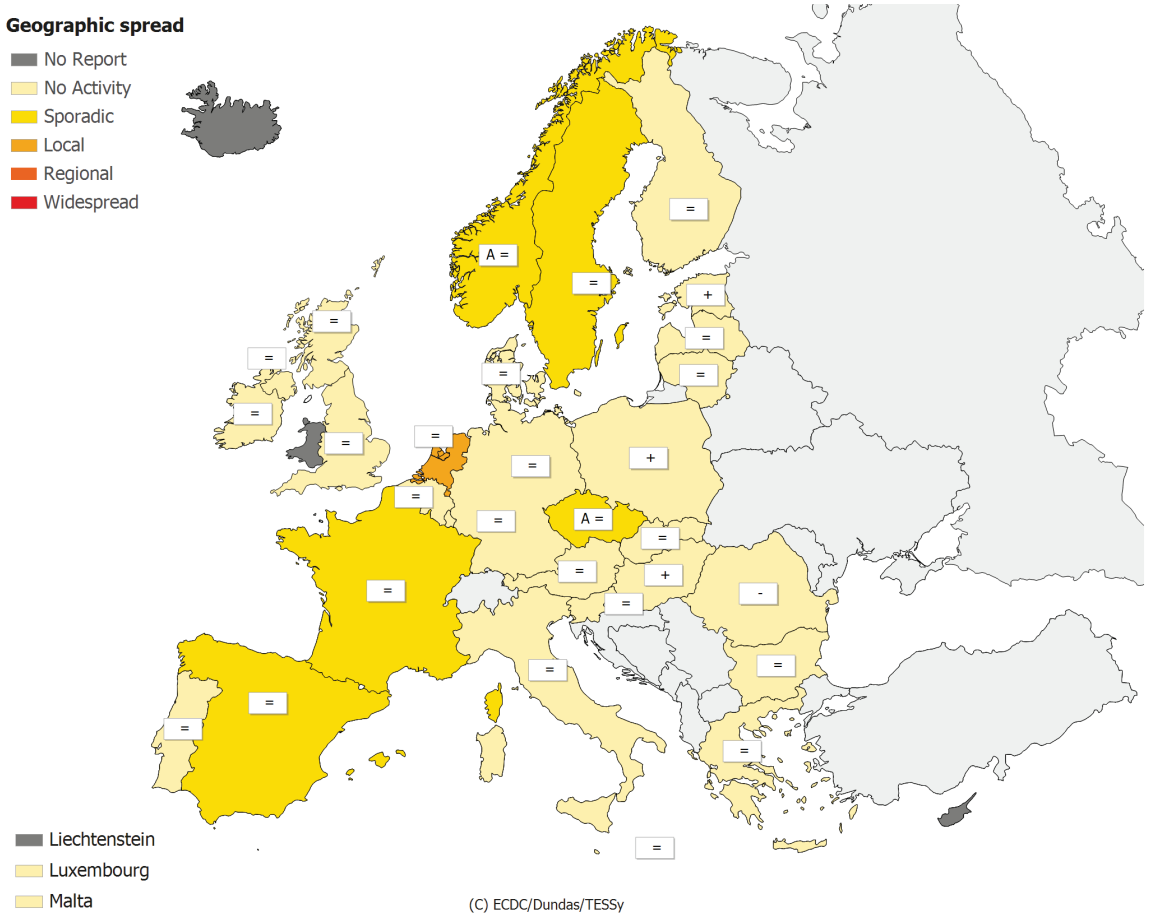


* A type/subtype is reported as dominant when at least ten samples have been detected as influenza positive in the country and of those > 40 % are positive for the type/subtype.

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		

Map 2: Geographic spread for week 48/2011



* 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)		
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 48/2011

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	Stable	2	None	0.0	22.0	-	Graphs	Graphs
Belgium	Low	No activity	Stable	15	None	0.0	76.9	1953.6	Graphs	Graphs
Bulgaria	Low	No activity	Stable	6	None	0.0	-	1068.2	Graphs	Graphs
Cyprus				-	-	0.0	-	-		
Czech Republic	Low	Sporadic	Stable	18	A	16.7	32.9	996.8	Graphs	Graphs
Denmark	Low	No activity	Stable	13	None	7.7	62.0	-	Graphs	Graphs
Estonia	Low	No activity	Increasing	5	-	0.0	6.3	291.6	Graphs	Graphs
Finland	Low	No activity	Stable	21	None	0.0	-	-	Graphs	Graphs
France	Low	Sporadic	Stable	87	None	0.0	-	2054.5	Graphs	Graphs
Germany	Low	No activity	Stable	42	None	2.4	-	1313.9	Graphs	Graphs
Greece	Low	No activity	Stable	0	None	0.0	70.5	-	Graphs	Graphs
Hungary	Low	No activity	Increasing	23	None	0.0	71.7	-	Graphs	Graphs
Iceland				0	None	0.0	-	-	Graphs	Graphs
Ireland	Low	No activity	Stable	11	None	0.0	8.4	-	Graphs	Graphs
Italy	Low	No activity	Stable	26	None	0.0	123.9	-	Graphs	Graphs
Latvia	Low	No activity	Stable	0	None	0.0	0.0	1277.6	Graphs	Graphs
Lithuania	Low	No activity	Stable	5	None	0.0	0.9	473.4	Graphs	Graphs
Luxembourg	Low	No activity	Stable	3	None	0.0	-*	-*	Graphs	Graphs
Malta	Low	No activity	Stable	-	-	0.0	-*	-*	Graphs	Graphs
Netherlands	Low	Local	Stable	13	None	0.0	36.4	-	Graphs	Graphs
Norway	Low	Sporadic	Stable	9	A	11.1	36.9	-	Graphs	Graphs
Poland	Low	No activity	Increasing	22	None	0.0	114.9	-	Graphs	Graphs
Portugal	Low	No activity	Stable	12	None	0.0	22.4	-	Graphs	Graphs
Romania	Low	No activity	Decreasing	16	None	0.0	3.1	664.2	Graphs	Graphs
Slovakia	Low	No activity	Stable	2	None	0.0	159.6	1509.4	Graphs	Graphs
Slovenia	Low	No activity	Stable	7	None	0.0	0.0	1113.8	Graphs	Graphs
Spain	Low	Sporadic	Stable	90	None	3.3	23.4	-	Graphs	Graphs
Sweden	Low	Sporadic	Stable	44	None	0.0	4.8	-	Graphs	Graphs
UK - England	Low	No activity	Stable	84	None	0.0	8.1	435.2	Graphs	Graphs
UK - Northern Ireland	Low	No activity	Stable	1	-	0.0	11.7	340.5	Graphs	Graphs
UK - Scotland	Low	No activity	Stable	28	None	0.0	12.6	518.9	Graphs	Graphs
UK - Wales				-	-	0.0	-	-		
Europe				605		1.5				**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 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 48/2011, 27 countries and the UK (England, Northern Ireland and Scotland) reported virological data. Of 605 sentinel specimens tested, nine (1.5%) were positive for influenza virus (Table 2, Figure 1).

In addition, 40 non-sentinel source specimens, e.g. specimens collected for diagnostic purposes in hospitals, were positive for influenza virus. Of the 49 influenza viruses detected from sentinel and non-sentinel sources during week 48/2011, 45 (91.8%) were type A and four (8.2%) were type B. Fifteen of the influenza A viruses were sub-typed as A(H3) and four as A(H1)pdm09 virus.

Of the 54 influenza virus detections in sentinel specimens since week 40/2011, 39 (72.2%) were type A and 15 (27.8%) were type B viruses. Of 28 influenza A viruses sub-typed, four (14.3%) were A(H1)pdm09 and 24 (85.7%) were A(H3) viruses (Table 2, Figures 2 and 3).

More details on circulating viruses can be found in the August–September report prepared by the Community Network of Reference Laboratories (CNRL) coordination team. Since week 40/2011 five antigenic characterisations have been reported to TESSy (Figure 4).

One country has reported data on antiviral susceptibility for the 2011/2012 season. Seven A(H3N2) viruses have been tested for M2 blocker (adamantane) resistance and all carried the S31N substitution associated with M2 blocker resistance. The viruses have not been tested for neuraminidase inhibitor susceptibility.

In week 48/2011, 17 countries reported an increasing number (n= 776) of respiratory syncytial virus detections (Figure 5).

Table 2: Weekly and cumulative influenza virus detections by type, sub-type and surveillance system, weeks 40/2011–48/2011

	Current period		Season	
Virus type/sub-type	Sentinel	Non-sentinel	Sentinel	Non-sentinel
Influenza A	8	37	39	125
A (H1)pdm09	1	3	4	12
A (H3)	4	11	24	53
A (sub-typing not performed)	3	23	11	60
Influenza B	1	3	15	31
B(Vic) lineage	0	1	0	3
B(Yam) lineage	1	0	4	0
Unknown lineage	0	2	11	28
Total Influenza	**9**	**40**	**54**	**156**

Note: A(H1)pdm09 and A(H3) include both N-subtyped and non-N-subtyped viruses

Figure 1: Proportion of sentinel samples positive for influenza, weeks 40/2011–48/2011

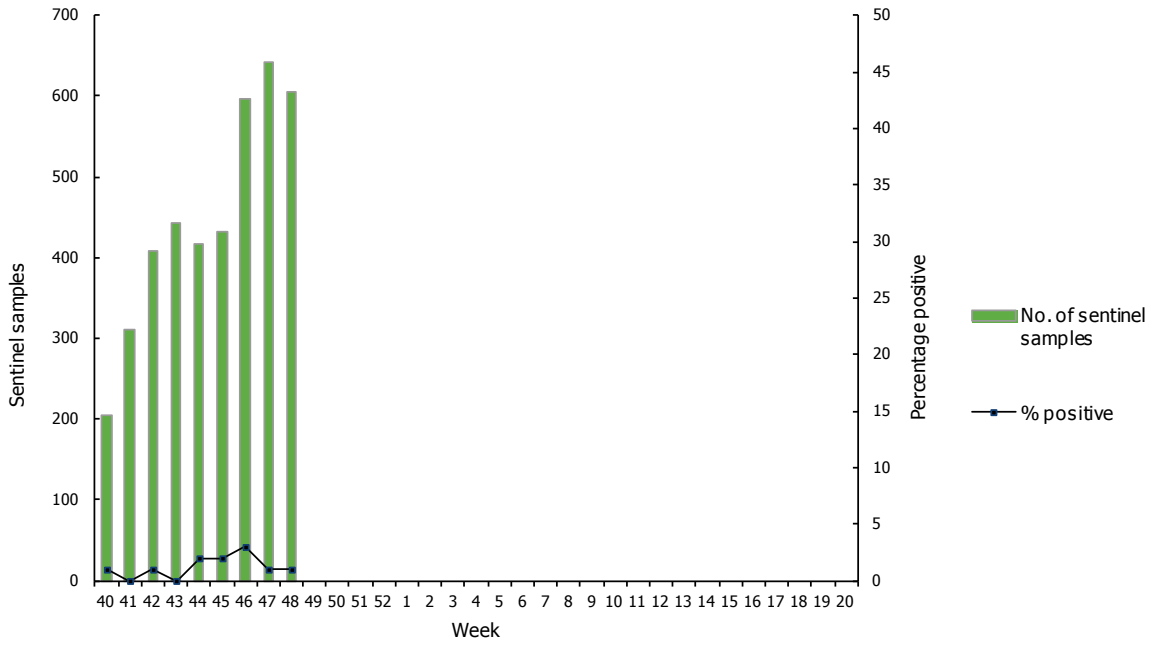


Figure 2: Number of sentinel specimens positive for influenza, by type, sub-type and week of report, weeks 40/2011–48/2011

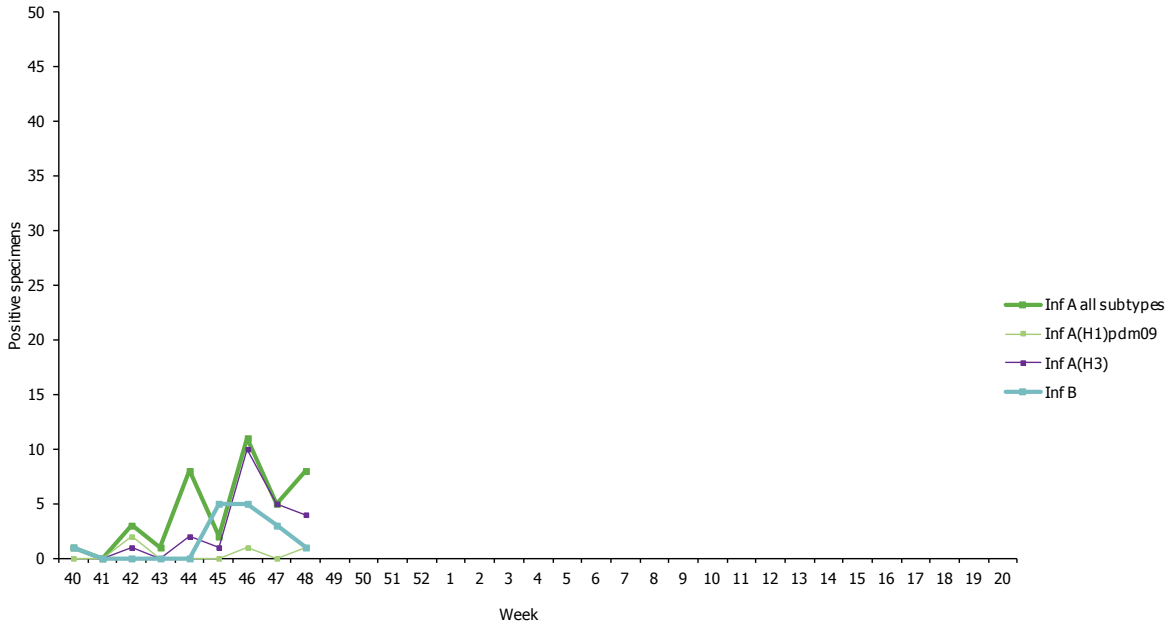


Figure 3: Number of non-sentinel specimens positive for influenza by type, sub-type and week of report, weeks 40/2011–48/2011

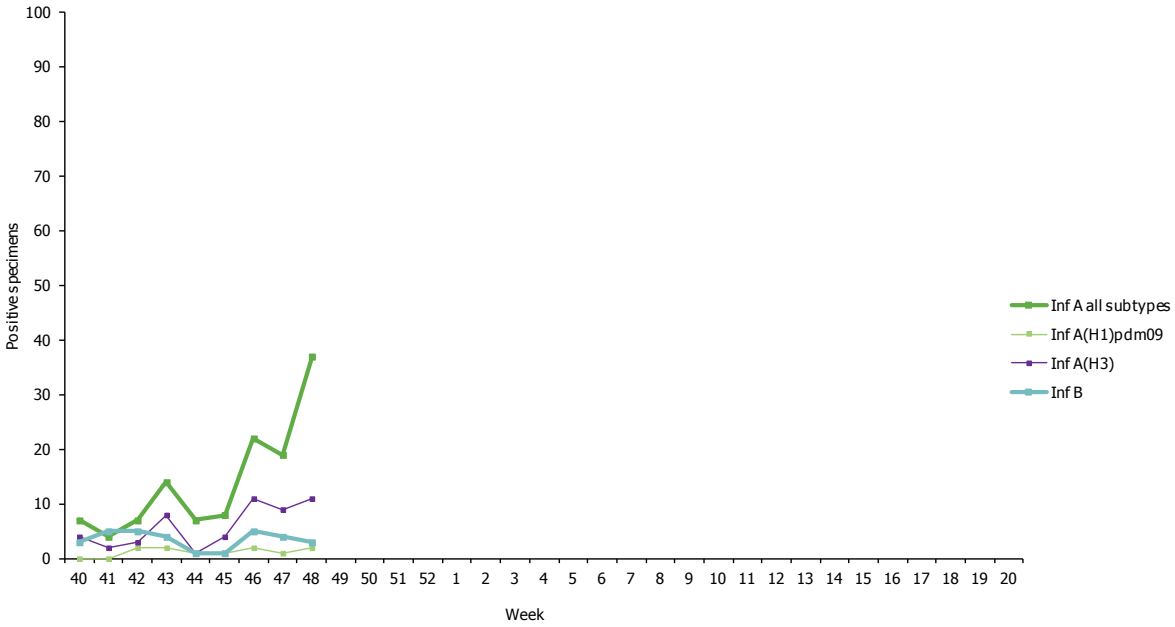


Figure 4: Results of antigenic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40/2011–48/2011

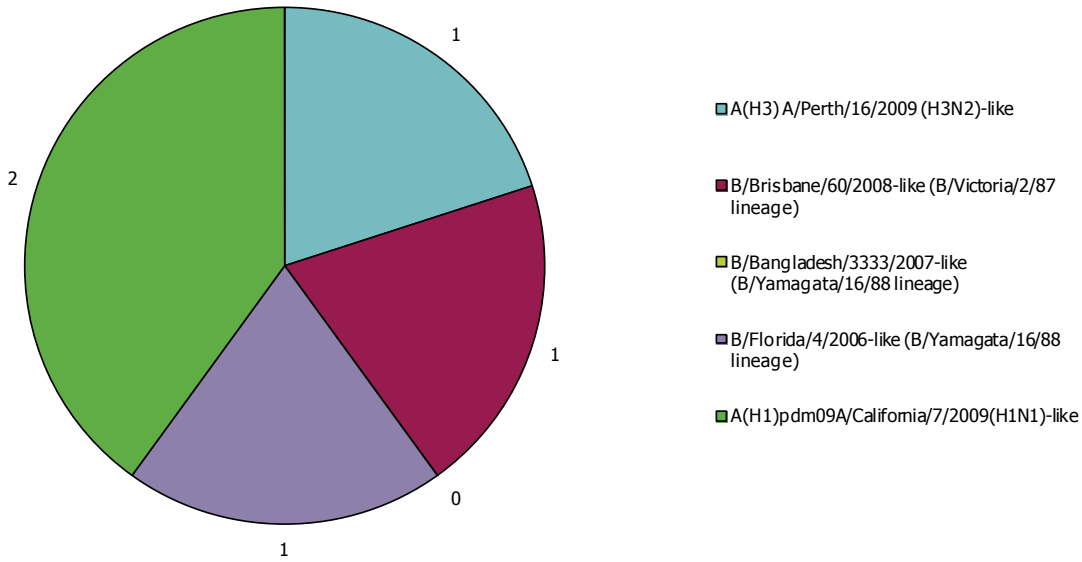
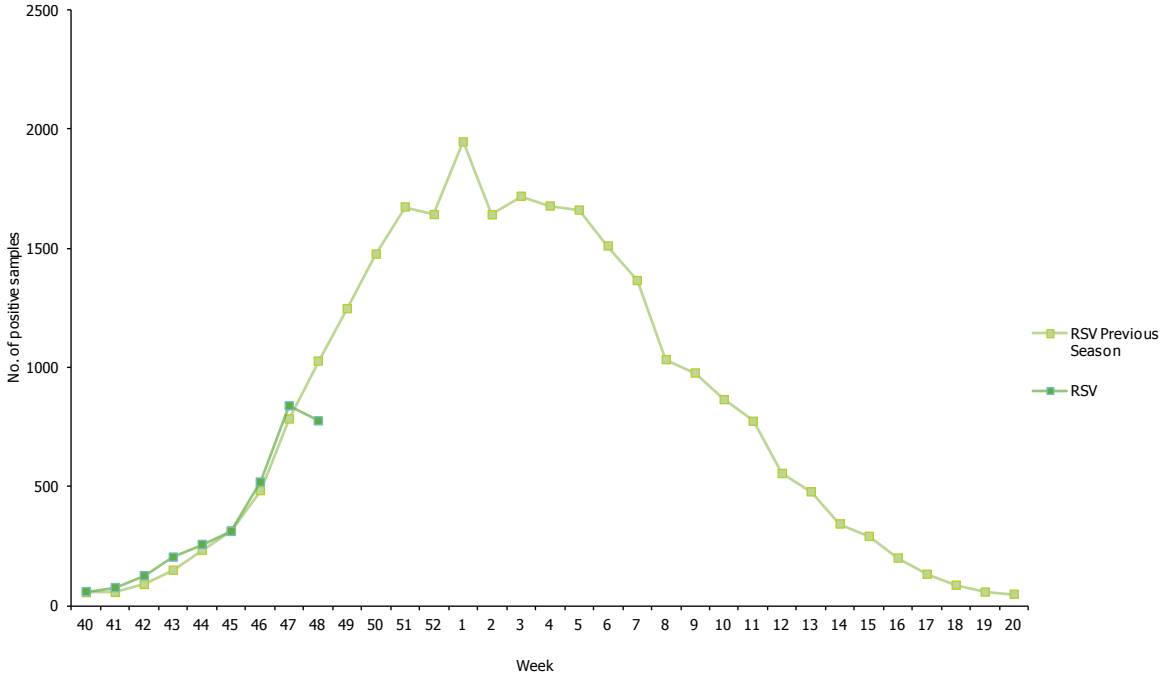


Figure 5: Respiratory syncytial virus (RSV) detections, sentinel and non-sentinel, weeks 40/2011–48/2011



Country comments

The Netherlands: Seven of the eight influenza A viruses reported for week 48 originate from an outbreak of influenza in a nursing home in the middle of the Netherlands; five from residents and two from personnel. So far, five of the clinical specimens with high enough viral load have been subtyped as H3 and two virus isolates have been obtained. The outbreak of fever with respiratory complaints started on 25 November. By 8 December, about 40% of the residents in two of four wards fulfilled the case definition and some cases were found on the two other wards. Four residents with respiratory illness have died. Two of these fatalities had had their infections laboratory-confirmed as influenza virus type A. About 70% of the residents were vaccinated on 9 November with the Northern Hemisphere trivalent influenza vaccine. Virus isolates are being characterised and the outbreak is being monitored.

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 influenza disease

Weekly analysis of severe acute respiratory infection – SARI

Since week 40/2011, a total of 61 SARI cases and two fatalities have been reported to TESSy by four countries (Table 3). Twenty-six (56.5 %) of 46 patients for whom information was available were males (Table 4). Of the cases reported during week 48/2011, four were known to be related to influenza infection (Table 5), three of which were infected by an A(H1)pdm09 virus. Of the 43 patients with documented vaccination status, 42 (97.7%) were not vaccinated (Table 6)

Table 3: Cumulative number of SARI cases, weeks 40/2011–week 48/2011

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
France	3				
Romania	38	0.65	2	0.03	5813728
Slovakia	5	0.09			5440078
United Kingdom	15	0.03			59255492
Total	**61**		**2**		

Table 4: Number of SARI cases by age and gender, weeks 40/2011–48/2011

Age groups	Male	Female	Unknown
Under 2	9	3	
2-17	5	6	
18-44	3	7	
45-59	3	1	
>=60	6	3	
Unknown			15
Total	**26**	**20**	**15**

Table 5: Number of SARI cases by influenza type and sub-type and other pathogens, week 48/2011 and cumulative for the season

Pathogen	Number of cases during current week	Cumulative number of cases since the start of the season
Influenza A	3	16
A(H1)pdm09	3	9
A(sub-typing not performed)		6
A(H1)		
A(H3)		1
Influenza B	1	2
Other pathogen		
Unknown	17	43
Total	**21**	**61**

Table 6: Number of SARI cases by vaccination status, weeks 40/2011–48/2011

Vaccination Status	Number of cases	Percentage of cases
Not vaccinated	42	68.9
Seasonal 2010 vaccination	1	1.6
Unknown	18	29.5
TOTAL	**61**	

Country comments:

Romania: Laboratory investigations have been performed for 89.5% of SARI cases. Detected pathogens were: seven parainfluenza virus type 1; two parainfluenza virus type 4; two RSV type B; two adenovirus; one rhinovirus; one bocavirus and one *Str.pneumoniae*. To date, the total positivity rate for SARI cases has been 47% and the positivity rate for influenza in SARI cases 0%. In one of the two deaths registered in SARI cases, one adenovirus was detected. Laboratory investigation is ongoing for the other one.

This report was written by an editorial team at the European Centre for Disease Prevention and Control (ECDC): Eeva Broberg, Flaviu Plata, Julien Beauté 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 Amparo Larrauri Cámara (Instituto de Salud Carlos III, Spain) and Suzie Coughlan (UCD National Virus Reference Laboratory, Ireland). In addition, the report is reviewed by experts of WHO Regional Office for Europe.