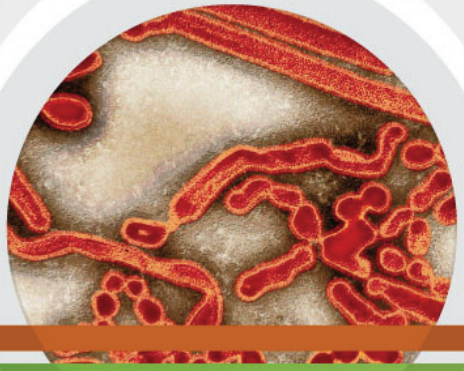


SURVEILLANCE REPORT

Weekly influenza surveillance overview

16 December 2011

Main surveillance developments in week 49/2011 (5–11 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 49/2011, low influenza activity was notified by all 26 countries reporting.
- Of 598 sentinel specimens tested, 12 (2.0%) were positive for influenza virus. Of the 67 influenza virus detections in sentinel specimens since week 40/2011, 51 were type A and 16 were type B viruses. Of 35 influenza A viruses found in sentinel specimens and subtyped, three were A(H1)pdm09 and 32 were A(H3) viruses.
- Since week 40/2011, 78 SARI cases have been reported. Eighteen of them were confirmed influenza cases.
- With no evidence of sustained transmission in EU/EEA countries at week 49, the annual influenza epidemics have yet to start this season in Europe.

Sentinel surveillance of influenza-like illness (ILI)/ acute respiratory infection (ARI): Influenza activity of low intensity was notified by all 26 countries that reported with the Netherlands reporting local spread. For more information, **click here**.

Virological surveillance: The low proportion of sentinel specimens testing positive for influenza virus (2.0%) suggests that there are currently few influenza viruses circulating in Europe. For more information, **click here**.

Hospital surveillance of severe acute respiratory infection (SARI): Since week 40/2011, four countries have reported 78 SARI cases, 18 of which were related to influenza infection. For more information, **click here**.

Sentinel surveillance (ILI/ARI)

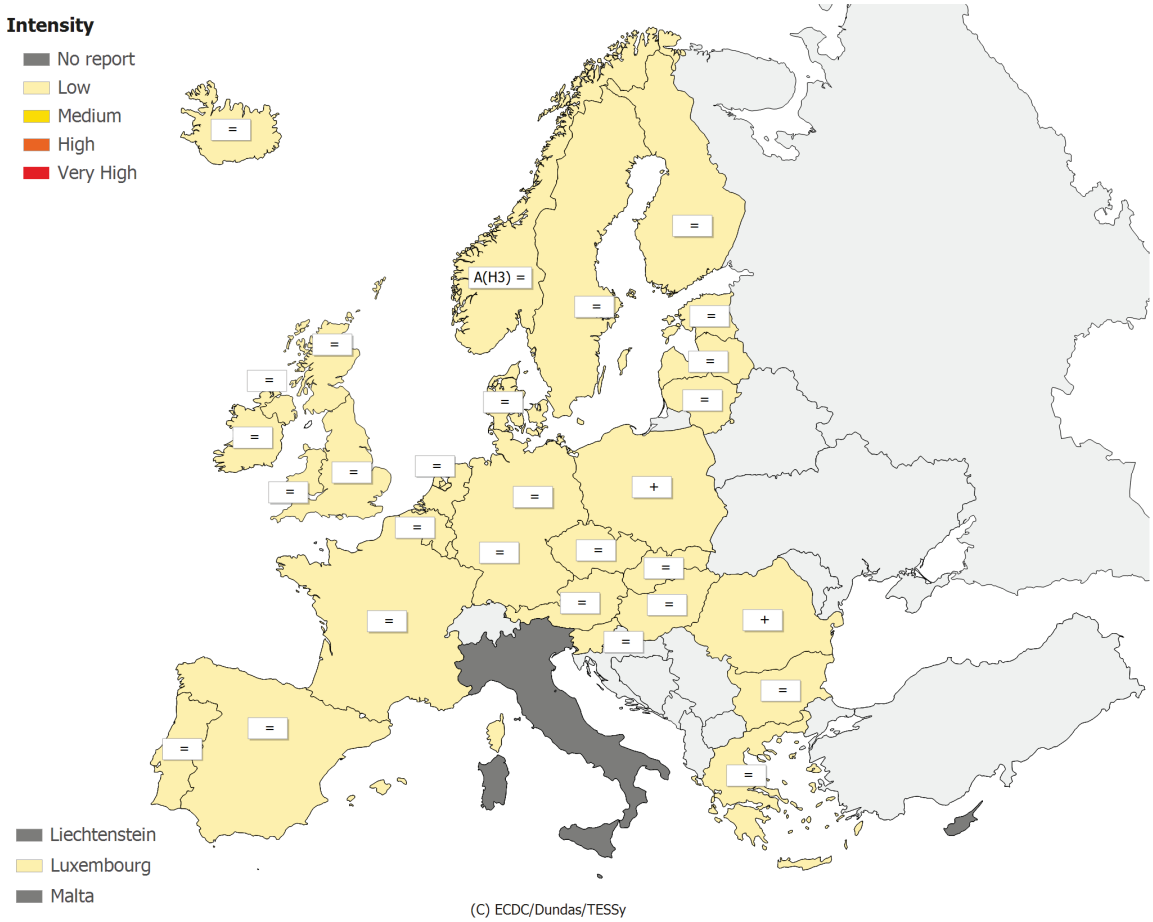
Weekly analysis – epidemiology

During week 49/2011, all 26 countries reporting experienced low-intensity influenza activity (Table 1, Map 1).

Only the Netherlands reported local spread. Sporadic activity was reported by Belgium, the Czech Republic, Estonia, France, Iceland, Norway, Slovenia, Spain, Sweden and the UK (Scotland). No geographic spread was reported by 15 countries and the UK (England, Northern Ireland and Wales) (Table 1, Map 2).

Stable trends were reported by 24 countries while an increasing trend was reported by Poland and Romania (Table 1, Map 2).

Map 1: Intensity for week 49/2011

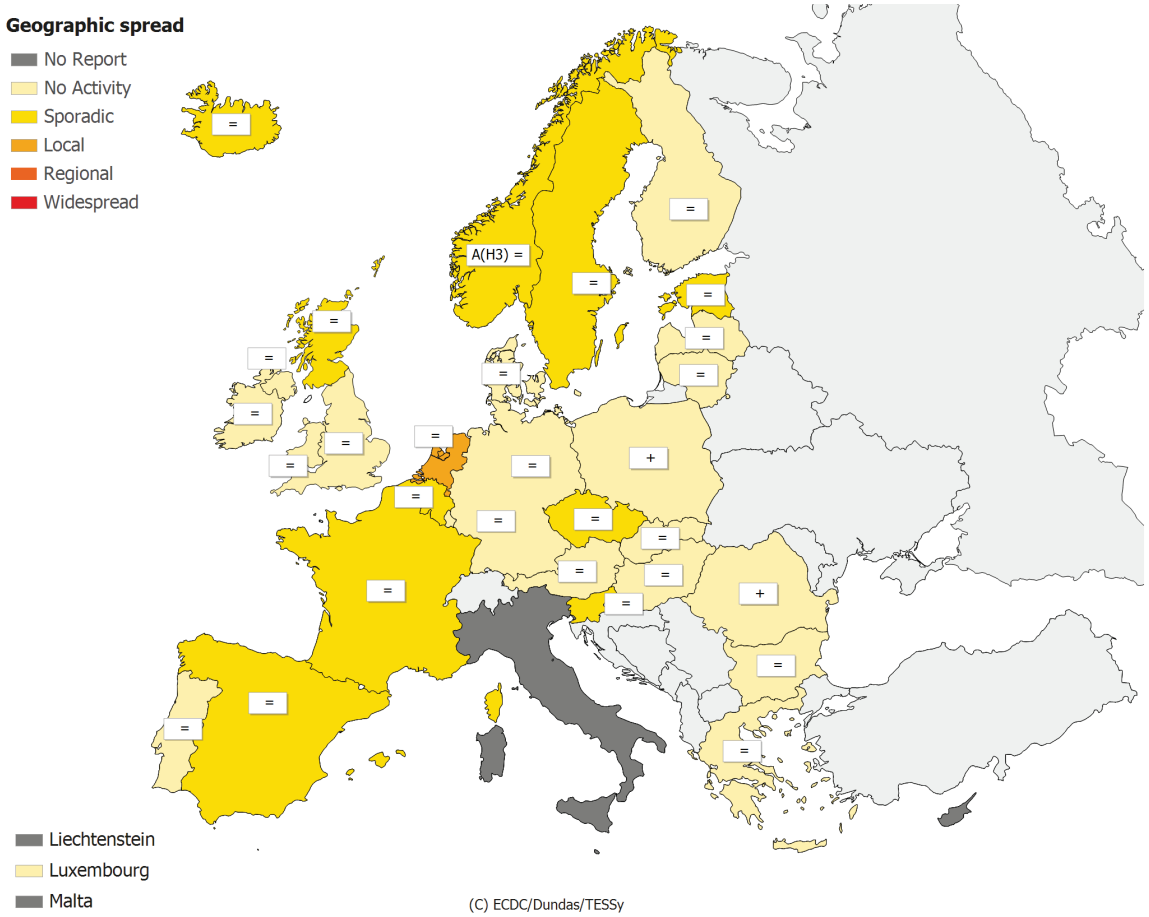


* A type/subtype is reported as dominant when at least ten samples have been detected as influenza positive in the country and of those > 40 % are positive for the type/subtype.

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(H3)**	Type A, Subtype H3
Very high	Particularly severe levels of influenza activity		

Map 2: Geographic spread for week 49/2011



* 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
		=	Stable clinical activity
Sporadic	Isolated cases of laboratory confirmed influenza infection	**A(H3)**	Type A, Subtype H3
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)		

Table 1: Epidemiological and virological overview by country, week 49/2011

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	5	None	0.0	18.3	-	Graphs	Graphs
Belgium	Low	Sporadic	Stable	35	None	8.6	101.9	1903.4	Graphs	Graphs
Bulgaria	Low	No activity	Stable	0	None	0.0	-	1018.0	Graphs	Graphs
Cyprus				-	-	0.0	-	-		
Czech Republic	Low	Sporadic	Stable	22	None	9.1	35.7	1013.2	Graphs	Graphs
Denmark	Low	No activity	Stable	8	None	0.0	65.5	-	Graphs	Graphs
Estonia	Low	Sporadic	Stable	4	None	0.0	6.2	251.3	Graphs	Graphs
Finland	Low	No activity	Stable	30	None	0.0	-	-	Graphs	Graphs
France	Low	Sporadic	Stable	73	None	2.7	-	2167.6	Graphs	Graphs
Germany	Low	No activity	Stable	74	None	0.0	-	1307.8	Graphs	Graphs
Greece	Low	No activity	Stable	0	None	0.0	67.1	-	Graphs	Graphs
Hungary	Low	No activity	Stable	24	None	0.0	73.5	-	Graphs	Graphs
Iceland	Low	Sporadic	Stable	0	-	0.0	4.1	-	Graphs	Graphs
Ireland	Low	No activity	Stable	5	None	0.0	9.3	-	Graphs	Graphs
Italy				20	None	15.0	-	-	Graphs	Graphs
Latvia	Low	No activity	Stable	-	-	0.0	0.0	1253.9	Graphs	Graphs
Lithuania	Low	No activity	Stable	2	None	0.0	0.9	525.0	Graphs	Graphs
Luxembourg	Low	No activity	Stable	13	None	0.0	-*	-*	Graphs	Graphs
Malta				0	None	0.0	-*	-*	Graphs	Graphs
Netherlands	Low	Local	Stable	10	None	0.0	21.8	-	Graphs	Graphs
Norway	Low	Sporadic	Stable	5	A(H3)	0.0	40.1	-	Graphs	Graphs
Poland	Low	No activity	Increasing	27	None	0.0	137.4	-	Graphs	Graphs
Portugal	Low	No activity	Stable	0	None	0.0	0.0	-	Graphs	Graphs
Romania	Low	No activity	Increasing	18	None	0.0	4.3	742.2	Graphs	Graphs
Slovakia	Low	No activity	Stable	6	None	0.0	160.6	1529.4	Graphs	Graphs
Slovenia	Low	Sporadic	Stable	5	None	0.0	5.2	967.7	Graphs	Graphs
Spain	Low	Sporadic	Stable	31	None	0.0	15.9	-	Graphs	Graphs
Sweden	Low	Sporadic	Stable	50	None	0.0	5.6	-	Graphs	Graphs
UK - England	Low	No activity	Stable	80	None	2.5	9.2	428.0	Graphs	Graphs
UK - Northern Ireland	Low	No activity	Stable	7	-	0.0	9.3	379.0	Graphs	Graphs
UK - Scotland	Low	Sporadic	Stable	36	None	0.0	11.6	480.9	Graphs	Graphs
UK - Wales	Low	No activity	Stable	8	-	0.0	8.3	-	Graphs	Graphs
Europe				**598**		**2.0**				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 1–5% 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 49/2011, 27 countries reported virological data. Of 598 sentinel specimens tested, 12 (2.0%) were positive for influenza viruses (Table 2, Figures 1 and 2). In addition, 47 non-sentinel source specimens, e.g. specimens collected for diagnostic purposes in hospitals, were positive for influenza virus (Table 2, Figure 3).

Of the 59 influenza viruses detected from sentinel and non-sentinel sources during week 49/2011, 58 (98.3%) were type A and 1 (1.7%) was type B. Of the 26 influenza A viruses subtyped, three (11.5%) were A(H1)pdm09, and 23 (88.5%) were A(H3) viruses (Table 2).

Of the 67 influenza virus detections in sentinel specimens since week 40/2011, 51 (76.1%) were type A and 16 (23.9%) were type B viruses. Of 35 influenza A viruses subtyped, three (8.5%) were A(H1)pdm09 and 32 (91.5%) were A(H3) viruses (Table 2, Figures 2 and 3).

Since week 40/2011, Norway, Sweden and the Netherlands have reported antiviral resistance data to TESSy. None of the 14 isolates tested were resistant to neuraminidase inhibitors (Table 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.

In week 49/2011, sixteen countries reported 984 respiratory syncytial virus detections (Figure 4).

Table 2: Weekly and cumulative influenza virus detections by type, sub-type and surveillance system, weeks 40–49/2011

	Current period		Season	
Virus type/subtype	**Sentinel**	**Non-sentinel**	**Sentinel**	**Non-sentinel**
Influenza A	12	46	51	178
A (H1)pdm09	0	3	3	16
A (H3)	8	15	32	85
A (subtyping not performed)	4	28	16	77
Influenza B	0	1	16	33
B(Vic) lineage	0	1	0	4
B(Yam) lineage	0	0	5	2
Unknown lineage	0	0	11	27
Total Influenza	**12**	**47**	**67**	**211**

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 40–49/2011

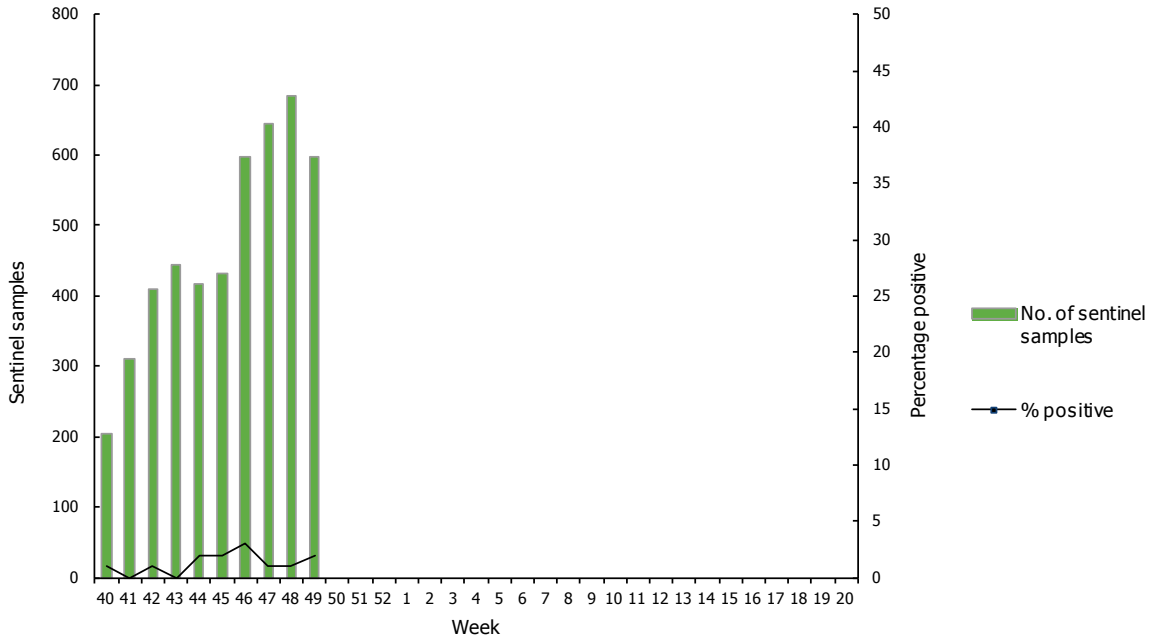


Figure 2: Number of sentinel specimens positive for influenza, by type, subtype and by week of report, weeks 40–49/2011

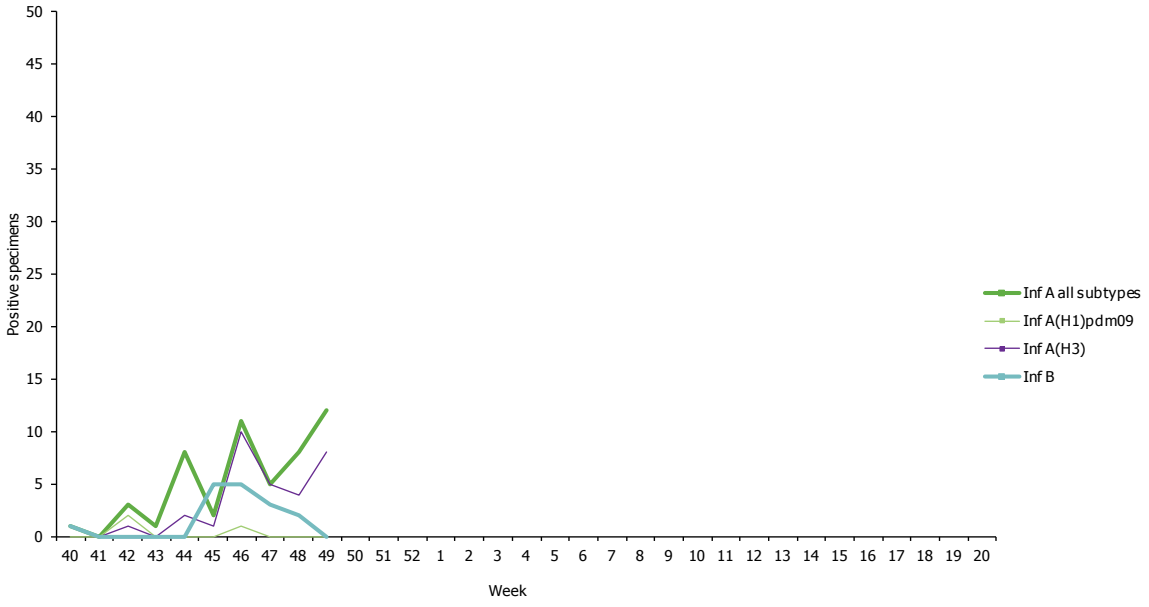


Figure 3: Number of non-sentinel specimens positive for influenza by type, subtype and week of report, weeks 40–49/2011

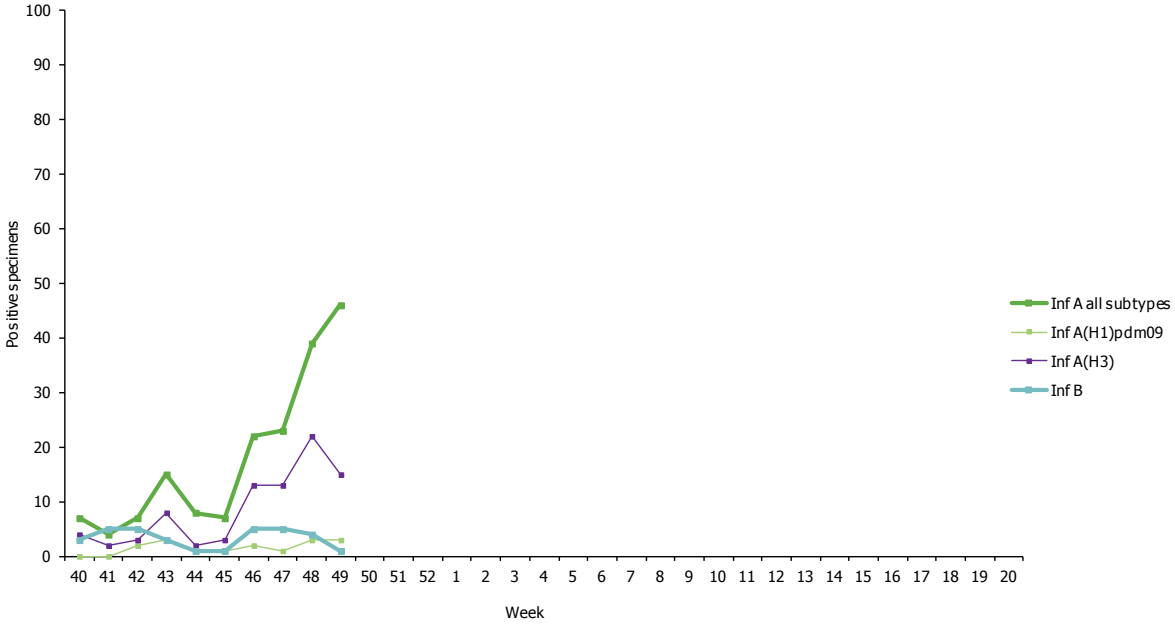
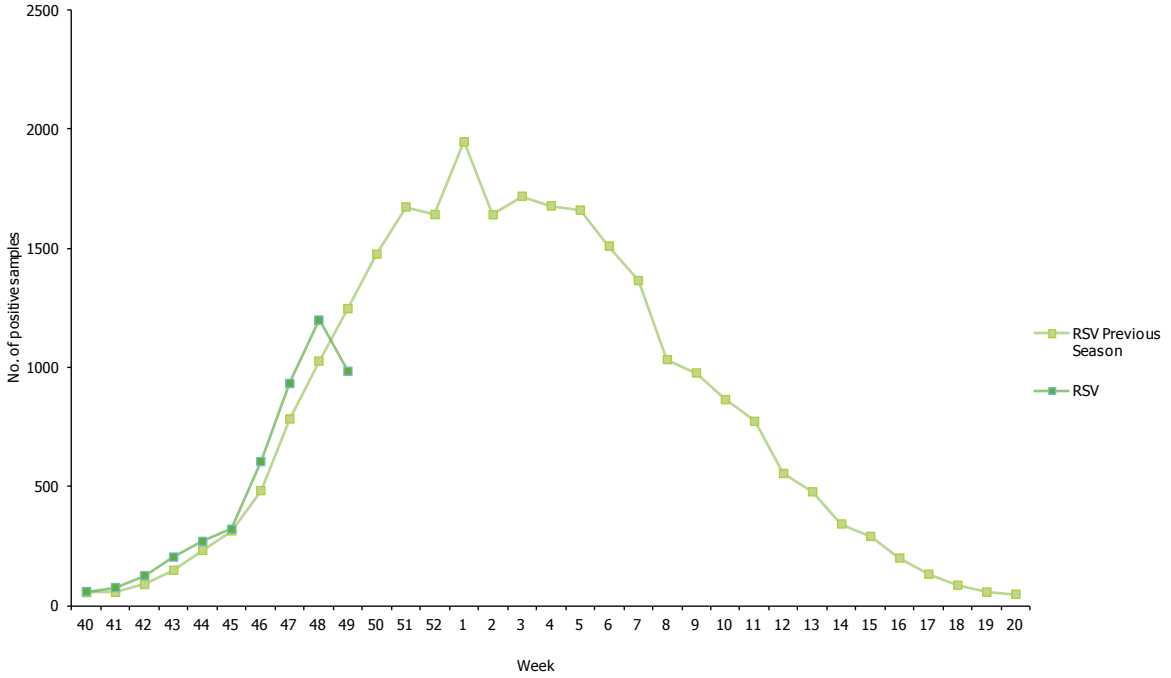


Table 3: Antiviral resistance by influenza virus type and sub-type, weeks 40/2011–49/2011

Virus type and subtype	Resistance to neuraminidase inhibitors				Resistance to M2 inhibitors	
	Oseltamivir		Zanamivir		Isolates tested	Resistant no. (%)
	Isolates tested	Resistant no. (%)	Isolates tested	Resistant no. (%)		
A(H3)	5	0	5	0	12	12(100)
A(H1)pdm09	2	0	2	0	2	2(100)
B	1	0	1	0	NA*	NA*

**NA – not applicable as M2 inhibitors do not act against influenza B viruses. Data are from a single location (e.g. H275Y only) or multiple location mutation analysis (full sequencing) and/or phenotypic characterisation (IC50 determination). Data should therefore be interpreted in this perspective.*

Figure 4: Respiratory syncytial virus (RSV) detections, sentinel and non-sentinel, weeks 40–49/2011



Country comments

Norway: Although the number of influenza virus detections in Norway remains low, there was an increase in influenza A detections in weeks 48 and 49. All 30 influenza A viruses analysed in Norway during the first weeks of this season have consistently been of H3 subtype. A number of the viruses from week 49 tested negative for H1pdm09 in the primary laboratory and are expected to be confirmed as subtype H3 in the national reference laboratory.

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 78 SARI cases and three fatalities have been reported to TESSy by four countries (Table 4). Thirty-five (55.6 %) of 63 patients for whom information was available were males (Table 5). Of the cases reported during week 49/2011, none were confirmed to be related to influenza infection (Table 6). Of the 60 patients with documented vaccination status, 57 (95%) were not vaccinated (Table 7).

Table 4: Cumulative number of SARI cases, weeks 40–week 49/2011

Country	Number of cases	Incidence of SARI cases per 100 000 population	Number of fatal cases reported	Incidence of fatal cases per 100 00 population	Estimated population covered
France	4				
Romania	54	0.93	**3**	0.05	5813728
Slovakia	5	0.09			5440078
United Kingdom	15	0.03			59255492
Total	**78**		**3**		

Table 5: Number of SARI cases by age and gender, weeks 40–49/2011

Age groups	Male	Female	Unknown
Under 2	14	6	
2-17	7	8	
18-44	4	8	
45-59	3	2	
>=60	7	4	
Unknown			**15**
Total	**35**	**28**	**15**

Table 6: Number of SARI cases by influenza type and sub-type and other pathogens, week 49/2011 and cumulative for the season

Pathogen	Number of cases during current week	Cumulative number of cases since the start of the season
Influenza A		16
A(H1)pdm09		9
A(sub-typing not performed)		6
A(H1)		
A(H3)		1
Influenza B		2
Other Pathogen	1	1
Unknown	16	59
Total	**17**	**78**

Table 7: Number of SARI cases by vaccination status, week 40-49/2011

Vaccination status	Number of cases	Percentage of cases
Not vaccinated	57	73.1
Seasonal 2010 vaccination	3	4
Unknown	18	23.1
TOTAL	**78**	

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.

Maps and commentary published in this Weekly Influenza Surveillance Overview (WISO) 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 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 database.