

SURVEILLANCE REPORT

Weekly influenza surveillance overview

18 February 2011

Main surveillance developments in week 6/2011 (07 Feb 2011 – 13 Feb 2011)

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

- Most European countries continue to report medium to high influenza-like illness /acute respiratory infection consultation rates and widespread activity. Decreasing ILI/ARI trends were reported by 14 countries.
- The proportion of influenza virus-positive sentinel specimens has gradually decreased to 43% after peaking in week 52/2010 at 57%
- Sixty-seven per cent of influenza virus detections in week 6/2011 were type A, 33% were type B. More than 99% of subtyped influenza A viruses were A(H1N1)2009.
- In week 6/2011, ten countries reported 180 all-cause SARI and hospitalised confirmed influenza cases, the latter mostly due to influenza virus A(H1N1)2009 infection.
- Numbers of influenza infections with severe outcome have decreased in western European Union countries (Denmark, France, the Netherlands, Ireland, Spain and the UK). However, there is considerable uncertainty about severe cases in a number of countries, especially those in central, eastern and south-eastern European countries, because of limited hospital surveillance.

Sentinel surveillance of influenza-like illness (ILI)/ acute respiratory infection (ARI): During week 06/2011, four countries (Greece, Hungary, Italy and Sweden) observed high intensity levels of ILI/ARI and Luxembourg continued to report very high intensity. Fourteen countries reported decreasing trends. For more information, [click here...](#)

Virological surveillance: Sentinel physicians collected 2 351 specimens, 1 022 (43.5%) of which tested positive for influenza virus. For more information, [click here...](#)

Hospital surveillance of severe acute respiratory infection (SARI): Belgium, Romania and Slovakia reported 75 all-cause SARI cases including three deaths, while seven countries reported 105 hospitalised confirmed influenza-infected cases including one death. For more information, [click here...](#)

Sentinel surveillance (ILI/ARI)

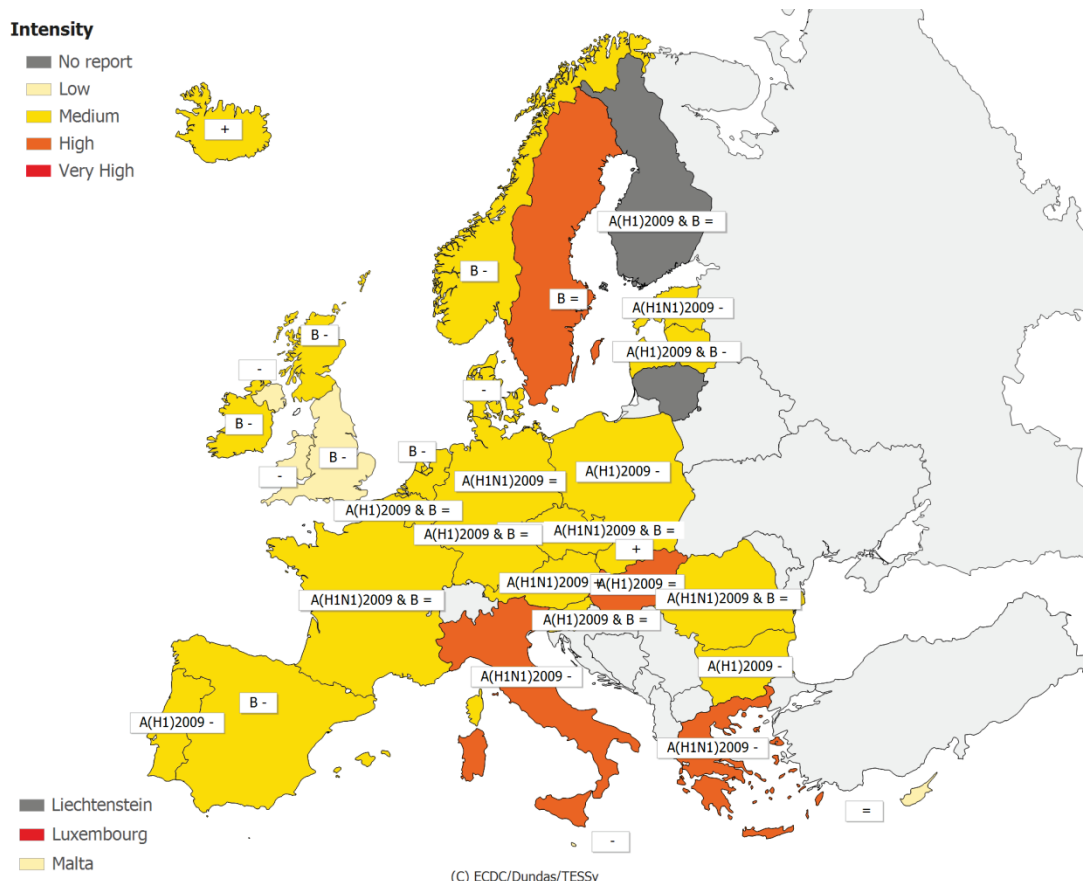
Weekly analysis – epidemiology

During week 06/2011, four countries (Greece, Hungary, Italy and Sweden) observed high intensity levels of ILI/ARI and Luxembourg continued to report very high intensity. Nineteen countries and the UK (Scotland) reported medium intensity while low intensity was reported by Cyprus, Malta and the UK (England, Northern Ireland and Wales) (Map 1, Table 1).

Eighteen countries across Europe reported widespread activity while the activity decreased from widespread to regional in Germany and from local to sporadic in the UK (England). In Iceland, the activity increased to regional for the first time this season. Overall, six countries in northern, central and eastern Europe reported regional activity, while three countries reported sporadic or local activity and one country (Austria) no spread (Map 2, Table 1).

Increasing trends were reported by only four countries (Austria, Czech Republic, Iceland and Slovakia), eight countries less than in the preceding week. Unchanging trends were seen in 10 countries. Fourteen countries, ten more than in week 05/2011, reported decreasing trends (Map 1 and 2, Table 1).

Map 1: Intensity for week 6/2011

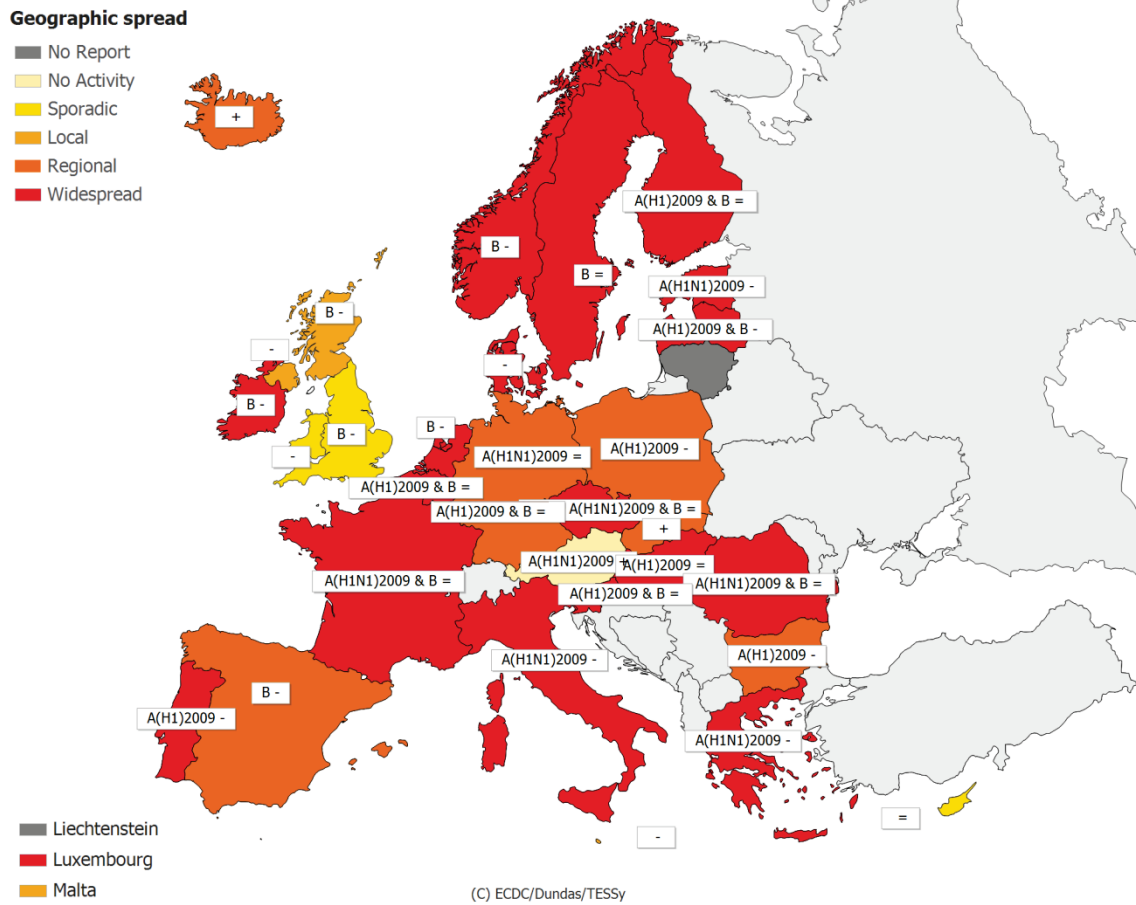


* A type/subtype is reported as dominant when > 40 % of all samples are positive for the type/subtype.

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(H1)2009	Type A, Subtype (H1)2009
		A(H1)2009 & B	Type B and Type A, Subtype (H1)2009
		A(H1N1)2009	Type A, Subtype (H1N1)2009
		A(H1N1)2009 & B	Type B and Type A, Subtype (H1N1)2009
		B	Type B

Map 2: Geographic spread for week 6/2011



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(H1)2009	Type A, Subtype (H1)2009
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)	A(H1)2009 & B	Type B and Type A, Subtype (H1)2009
		A(H1N1) 2009	Type A, Subtype (H1N1)2009
		A(H1N1) 2009 & B	Type B and Type A, Subtype (H1N1)2009
		B	Type B

Table 1: Epidemiological and virological overview by country, week 6/2011

Country	Intensity	Geographic spread	Trend	No. of sentinel specimens	Dominant type	Percentage positive*	ILI per 100.000	ARI per 100.000	Epidemiological overview	Virological overview
Austria	Medium	No activity	Increasing	70	A(H1N1)2009	68.6	-	33.2	Graphs	Graphs
Belgium	Medium	Widespread	Stable	53	BA(H1)2009	62.3	391.1	1695.1	Graphs	Graphs
Bulgaria	Medium	Regional	Decreasing	14	A(H1)2009	28.6	-	1439.3	Graphs	Graphs
Cyprus	Low	Sporadic	Stable	-	-	0.0	-*	-*	Graphs	Graphs
Czech Republic	Medium	Widespread	Increasing	29	BA(H1N1)2009	75.9	296.7	1583.2	Graphs	Graphs
Denmark	Medium	Widespread	Decreasing	51	None	25.5	-	-	Graphs	Graphs
Estonia	Medium	Widespread	Decreasing	55	A(H1N1)2009	34.5	23.0	502.3	Graphs	Graphs
Finland	Unknown (no information available)	Widespread	Stable	62	BA(H1)2009	71.0	-	-	Graphs	Graphs
France	Medium	Widespread	Stable	232	BA(H1N1)2009	41.4	-	2824.4	Graphs	Graphs
Germany	Medium	Regional	Stable	305	A(H1N1)2009	61.0	-	1342.3	Graphs	Graphs
Greece	High	Widespread	Decreasing	38	A(H1N1)2009	76.3	361.0	-	Graphs	Graphs
Hungary	High	Widespread	Stable	162	A(H1)2009	9.3	587.8	-	Graphs	Graphs
Iceland	Medium	Regional	Increasing	-	-	0.0	57.5	-	Graphs	Graphs
Ireland	Medium	Widespread	Decreasing	53	B	39.6	50.3	-	Graphs	Graphs
Italy	High	Widespread	Decreasing	230	A(H1N1)2009	36.5	965.4	-	Graphs	Graphs
Latvia	Medium	Widespread	Decreasing	21	BA(H1)2009	47.6	-*	-*	Graphs	Graphs
Lithuania				-	-	0.0	-	-		
Luxembourg	Very High	Widespread	Stable	108	BA(H1)2009	62.0	-*	-*	Graphs	Graphs
Malta	Low	Local	Decreasing	-	-	0.0	-*	-*	Graphs	Graphs
Netherlands	Medium	Widespread	Decreasing	31	B	29.0	70.9	-	Graphs	Graphs
Norway	Medium	Widespread	Decreasing	25	B	60.0	145.8	-	Graphs	Graphs
Poland	Medium	Regional	Decreasing	114	A(H1)2009	29.8	180.8	-	Graphs	Graphs
Portugal	Medium	Widespread	Decreasing	8	A(H1)2009	50.0	49.9	-	Graphs	Graphs
Romania	Medium	Widespread	Stable	55	BA(H1N1)2009	45.5	33.3	1012.6	Graphs	Graphs
Slovakia	Medium	Regional	Increasing	16	None	75.0	572.4	2820.6	Graphs	Graphs
Slovenia	Medium	Widespread	Stable	39	BA(H1)2009	82.1	69.6	1711.9	Graphs	Graphs
Spain	Medium	Regional	Decreasing	340	B	36.5	152.3	-	Graphs	Graphs
Sweden	High	Widespread	Stable	55	B	72.7	12.6	-	Graphs	Graphs
UK - England	Low	Sporadic	Decreasing	137	B	11.7	18.4	424.7	Graphs	Graphs
UK - Northern Ireland	Low	Local	Decreasing	-	-	0.0	35.6	372.6	Graphs	Graphs
UK - Scotland	Medium	Local	Decreasing	48	B	41.7	8.9	262.1	Graphs	Graphs
UK - Wales	Low	Sporadic	Decreasing	-	-	0.0	8.3	-	Graphs	Graphs
Europe				2351		43.5				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 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) 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 6/2011, 25 countries and the UK (England and Scotland) reported virological data. Sentinel physicians collected 2 351 specimens, 1 022 (43.5%) of which tested positive for influenza virus, continuing the slowly decreasing trend seen since week 52/2010 (Table 1, Figure 3). National detection rates increased in some countries, e.g. Denmark, Hungary, Slovakia, Slovenia and Sweden, but decreased in many countries in western, southern and central Europe (Table 1). In addition, 3 958 non-sentinel source specimens (i.e. specimens collected for diagnostic purposes in hospitals) were reported positive for influenza virus (Table 2).

Of the 4 980 influenza viruses detected during week 06/2011, 3 338 (67.0%) were type A and 1 642 (33.0%) were type B. Five countries in western and northern Europe reported influenza B as the dominant type (Table 1). Of the 2 826 influenza A viruses that were subtyped, 2 802 (99.2%) were A(H1)2009 and 24 (0.8%) were A(H3) (Table 2).

Since week 40/2010, 29 520 (69.9%) of the 42 261 influenza virus detections in sentinel and non-sentinel specimens were influenza A and 12 741 (30.1%) were influenza B viruses. Of 20 473 influenza A viruses subtyped, 19 992 (97.7%) were A(H1)2009 and 481 (2.3%) were A(H3) (Table 2). Trends of virological detections since week 40/2010 are shown in Figures 1–3.

Since week 40/2010, 1 655 influenza viruses from sentinel and non-sentinel specimens have been characterised antigenically (Figure 4): 915 (55.3%) as A/California/7/2009 (H1N1)-like; 86 (5.2%) as A/Perth/16/2009 (H3N2)-like; 601 (36.3%) as B/Brisbane/60/2008-like (Victoria lineage); and 53 (3.2%) as B/Florida/4/2006-like (Yamagata lineage).

Since week 40/2010, Ireland, Italy, Norway, Spain and the UK have reported antiviral resistance data to TESSy. A summary is shown in Table 3. Twenty-eight of 738 (3.8%) influenza A(H1)2009 viruses tested for susceptibility to neuraminidase inhibitors were resistant to oseltamivir, but remained sensitive to zanamivir. All the resistant viruses carried the neuraminidase H275Y substitution. Eight of 24 resistant viruses, from patients for which exposure to antivirals was known, were from patients that had not been treated with oseltamivir.

More details on circulating viruses can be found in the [December report](#) prepared by the Community Network of Reference Laboratories (CNRL) coordination team. The viruses circulating this season remain well-matched with the 2010/11 seasonal vaccine viruses.

Table 2: Weekly and cumulative influenza virus detections by type, subtype and surveillance system, weeks 40/2010–6/2011

Virus type/subtype	Current Period		Season	
	Sentinel	Non-sentinel	Sentinel	Non-sentinel
Influenza A	514	2824	7044	22476
A(H1)2009	450	2352	6286	13706
A (subtyping not performed)	59	453	571	8476
A (not subtypable)	0	0	0	0
A (H3)	5	19	187	294
A (H1)	0	0	0	0
Influenza B	508	1134	3664	9077
Total Influenza	1022	3958	10708	31553

Note: A(H1)2009, A(H3) and A(H1) includes both N-subtyped and non-N-subtyped viruses

Figure 1: Number of sentinel specimens positive for influenza, by type, subtype and by week of report, weeks 40/2010–6/2011

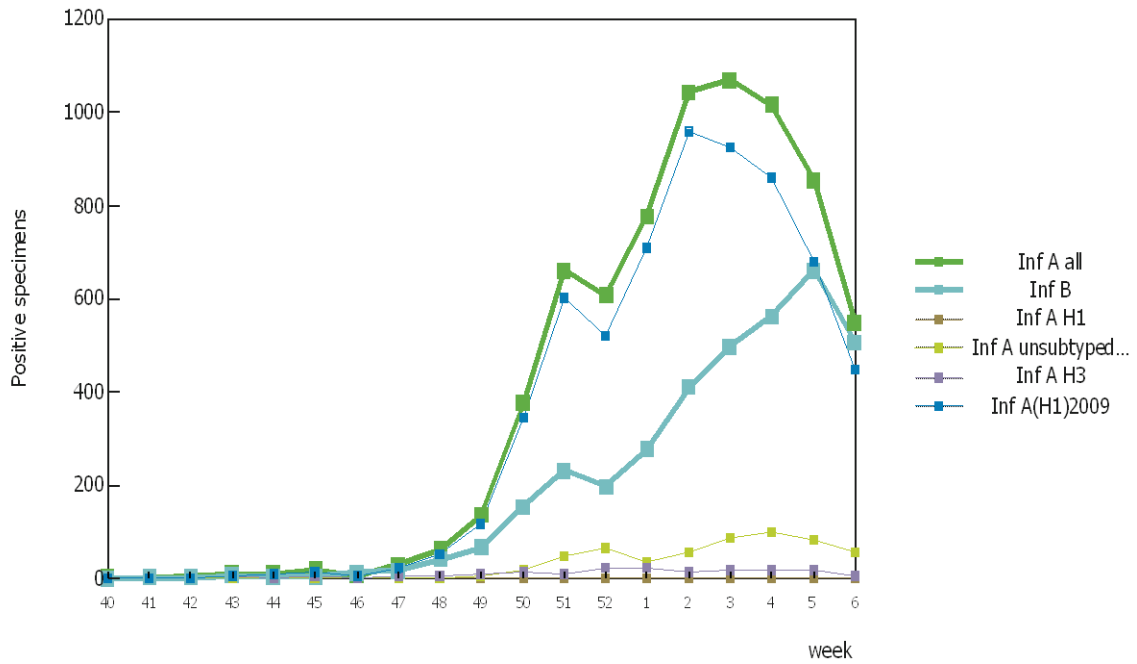


Figure 2: Number of non-sentinel specimens positive for influenza by type, subtype and week of report, weeks 40/2010–6/2011

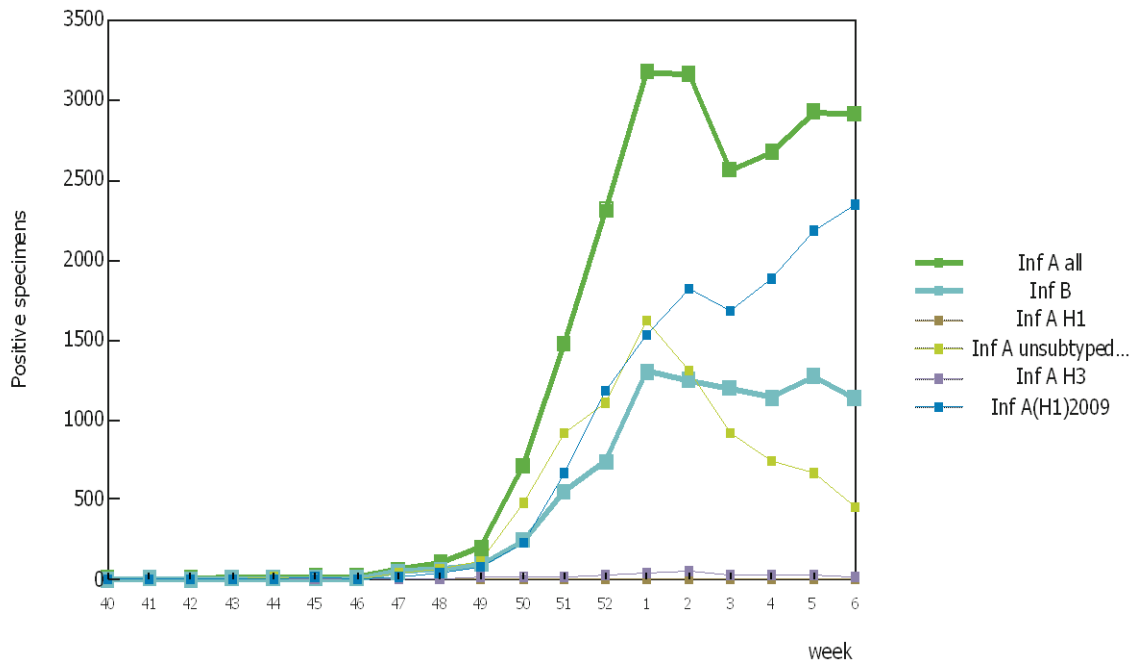


Figure 3: Proportion of sentinel samples positive for influenza, weeks 40/2010–6/2011

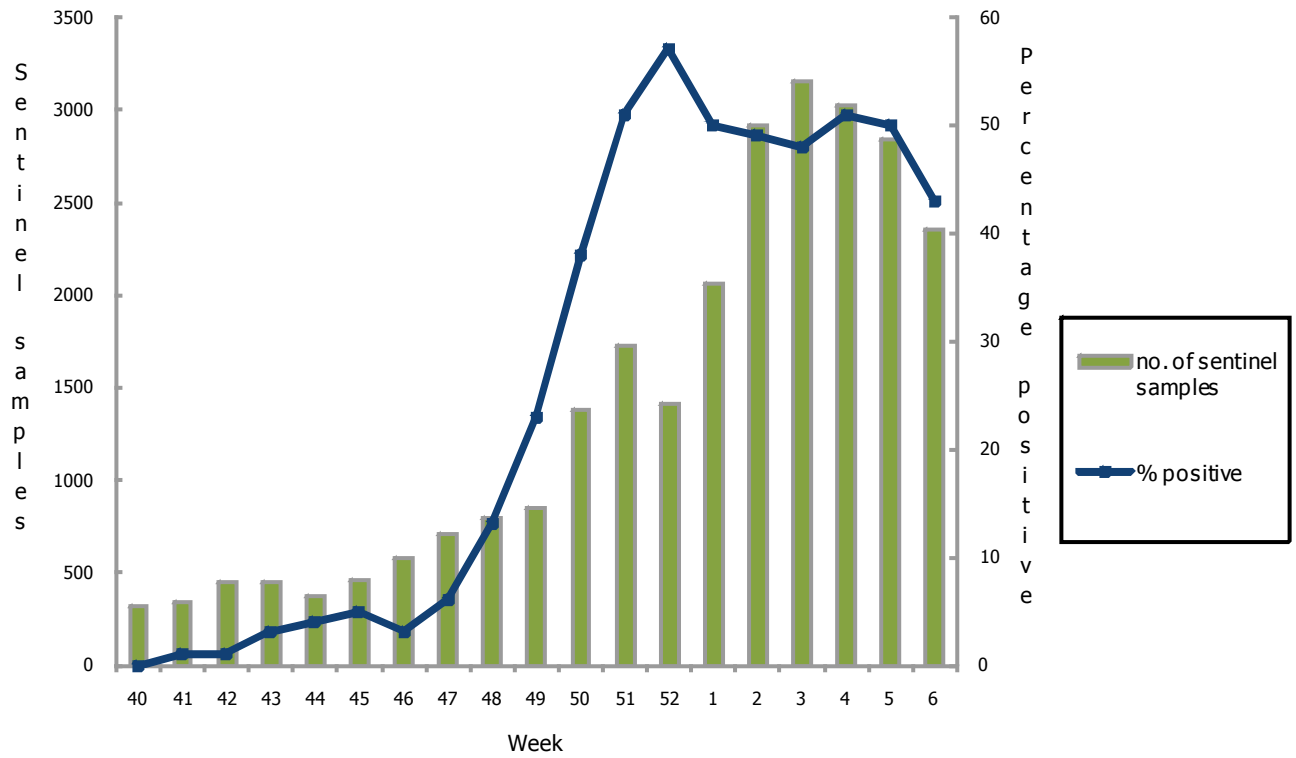


Figure 4: Results of antigenic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40/2010–6/2011

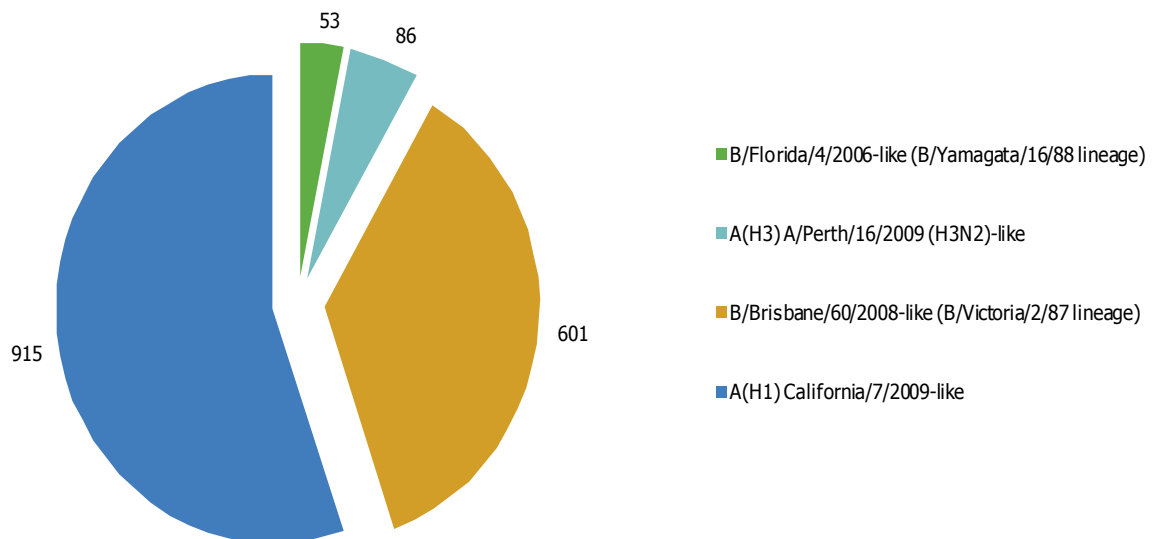
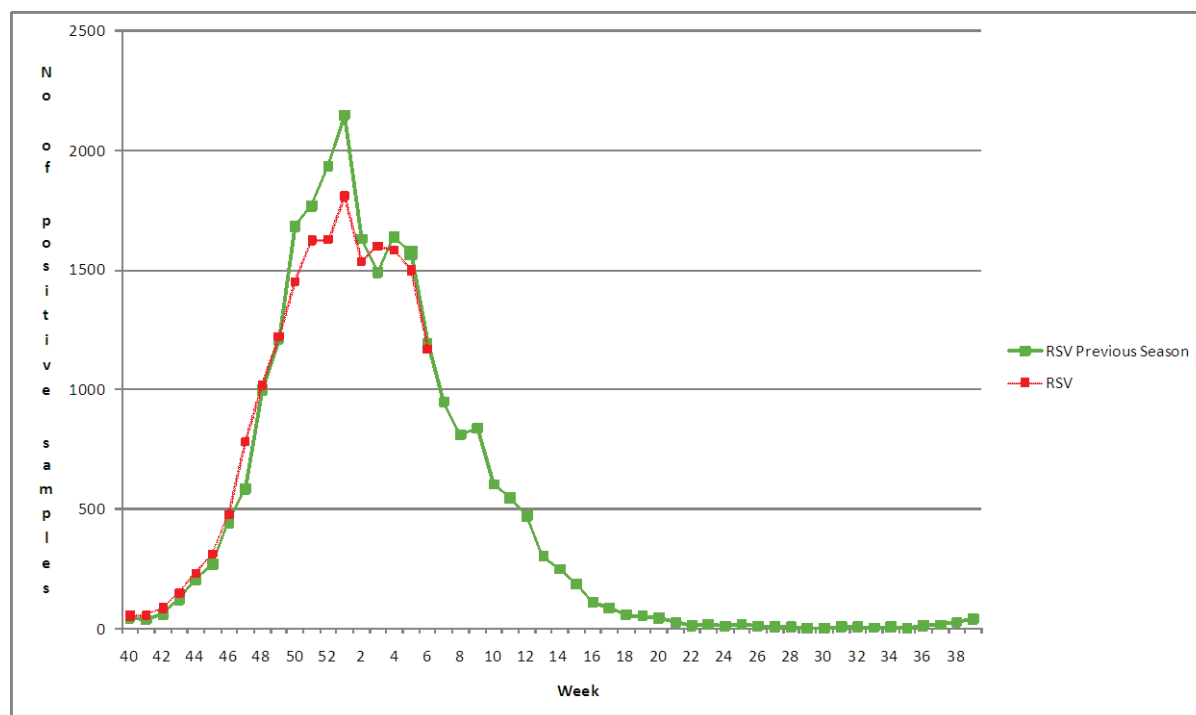


Table 3: Antiviral resistance by influenza virus type and subtype, weeks 40/2010–6/2011

Virus type and subtype	Resistance to neuraminidase inhibitors				Resistance to M2 inhibitors	
	Oseltamivir		Zanamivir		Isolates tested	Resistant n (%)
	Isolates tested	Resistant n (%)	Isolates tested	Resistant n (%)		
A(H3N2)	1	0	1	0	2	2 (100)
A(H1N1)	0	0	0	0	0	0
A(H1N1)2009	738	28 (3.8)	738	0	35	35 (100)
B	61	0	62	0	NA*	NA*

* NA - not applicable, as M2 inhibitors do not act against influenza B viruses

Figure 5: Respiratory syncytial virus (RSV) detections, sentinel and non-sentinel, weeks 40/2010–6/2011

Country comments

Greece: In a single clinical specimen a co-infection of influenza B virus and A(H1N1)2009 virus was confirmed by real time PCR. A total of 60 clinical specimens positive for A(H1N1)2009 (including deaths and SARI cases) were examined by real-time PCR for the presence of Tamiflu resistance mutation H275Y. None of these isolates were shown to carry the mutation.

Slovenia: In week 6, for the first time this season, in Slovenia influenza B (Vic) virus prevails over A(H1)2009 in both sentinel samples and samples from other 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 40/2010, three countries have reported SARI cases from all causes; i.e., irrespective of the causative pathogen (Table 4), and seven countries notified severe influenza cases admitted to hospital (Table 5). In this latter type of reporting, France and Ireland reported only cases admitted to intensive care (ICU).

In week 6/2011, Belgium, Romania and Slovakia reported 75 all-cause SARI cases including three deaths, while seven countries reported 105 hospitalised confirmed cases of influenza virus infection including one death.

Since week 40/2010, ten countries have reported 3 352 all-cause SARI and hospitalised confirmed cases of influenza virus infection including 252 deaths (Tables 4 and 5). The epidemic curve peaked in week 52/2010 (Figure 6).

Of 2 214 influenza virus detections since week 40/2010, 2 139 (96.6%) were type A and 75 (3.4%) were type B. Of 2 026 influenza A viruses subtyped, 2 012 (99.3%) were A(H1)2009 and 14 (0.7%) were A(H3) (Table 6). The percentage of influenza B virus detections is ten times higher (weeks 40/2010–6/2011, 34.2%) in the outpatient sentinel samples (Table 2) than it is for the SARI or for the severe influenza cases admitted to hospital.

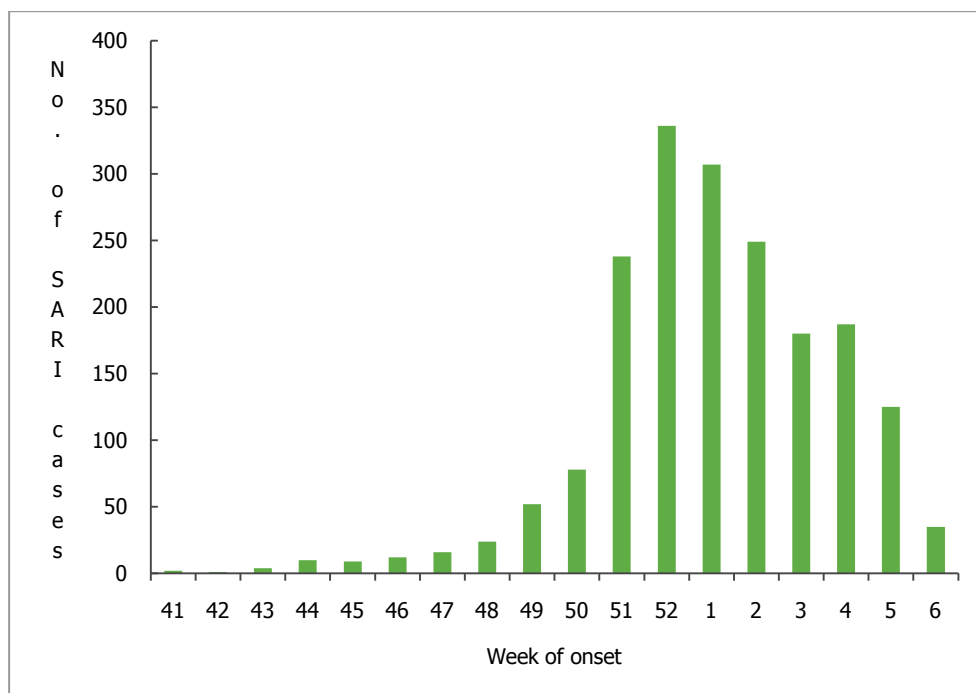
Overall, ICU admission was reported for 1 357 patients, 705 (52.0%) of whom were known to have required ventilation (Table 7). In patients for whom information was available, obesity was the most frequent underlying condition, but 1 022 (42.0%) of 2 436 all-cause SARI and hospitalised confirmed influenza-infected cases had no known prior underlying condition (Figure 7).

Table 4: Cumulative number of all-cause SARI cases, weeks 40/2010- 6/2011

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
Belgium	720				
Romania	217	3.38	14	0.22	6413821
Slovakia	42	0.77	4	0.07	5433385
Total	979		18		

Table 5: Cumulative number of hospitalised influenza cases, weeks 40/2010–6/2011

Country	Number of cases	Number of fatal cases reported
Austria	234	7
Spain	1062	106
Finland	46	6
France	534	63
Ireland	118	19
Malta	49	1
Portugal	330	32
Total	2373	234

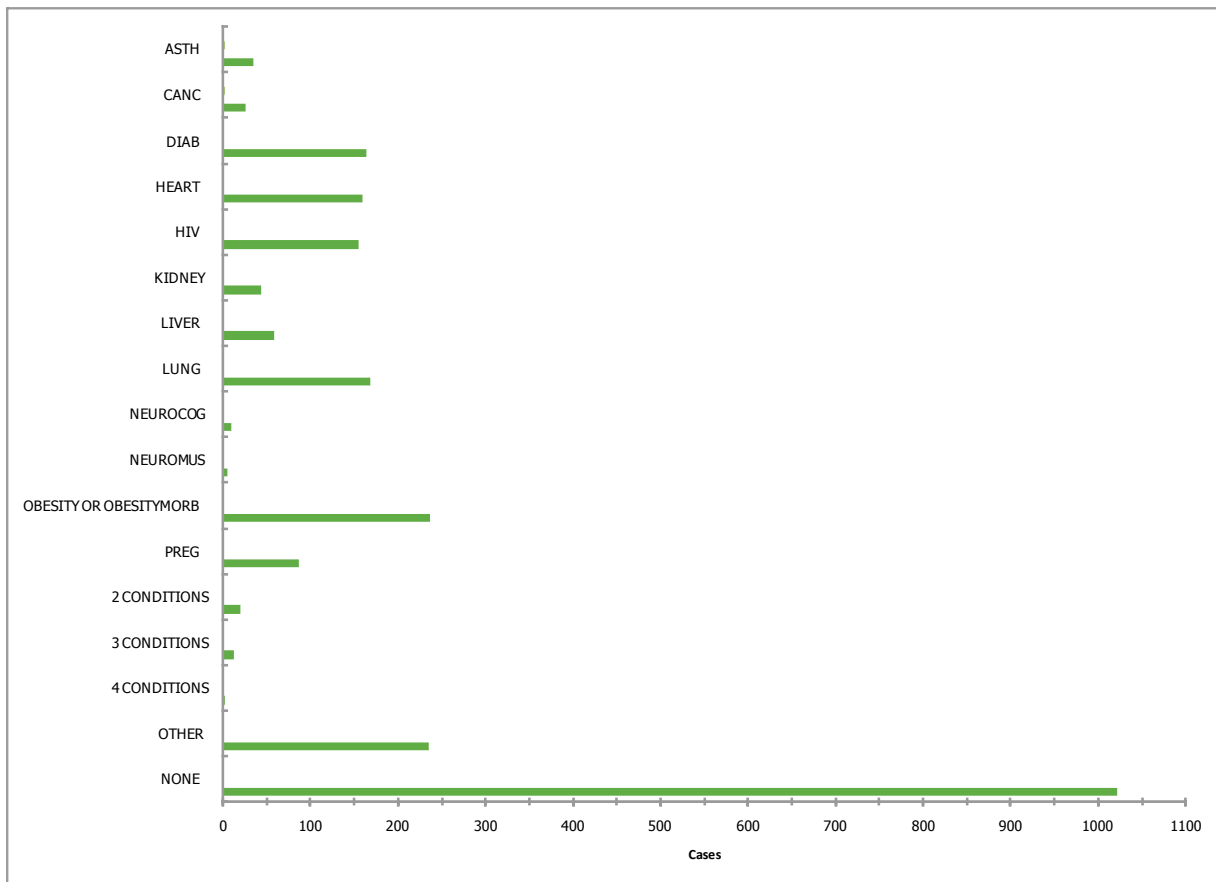
Figure 6: Number of SARI cases by week of onset, weeks 40/2010- week 6/2011**Table 6: Number of SARI cases by influenza type and subtype, week 6/2011**

Virus type/subtype	Number of cases during current week	Cumulative number of cases since the start of the season
Influenza A	115	2139
A(H1) 2009	112	2012
A(subtyping not performed)	3	113
A(H1)		
A(H3)		14
Influenza B	6	75
Other Pathogen		33
Unknown	59	1105
Total	180	3352

Table 7: Number of SARI cases by level of care and respiratory support, weeks 40/2010–6/2011

Respiratory support	ICU	Inpatient ward	Other	Unknown
No respiratory support available			1	
No respiratory support necessary	132	325	353	
Oxygen therapy	69	108	287	
Respiratory support given unknown	451	167	545	162
Ventilator	705	12	6	29
Total	1357	613	1191	191

Figure 7: Number of SARI cases by underlying condition, weeks 40/2010–6/2011



Note: Other (O) represents any other underlying condition than: asthma(ASTH), cancer(CANC), diabetes(DIAB), chronic heart disease(HEART), HIV/other immune deficiency(HIV), kidney-related conditions(KIDNEY), liver-related conditions(LIVER), chronic lung disease(LUNG), neurocognitive disorder (including seizure)(NEUROCOG), neuromuscular disorder(NEUROMUS), obesity (BMI between 30 and 40)(OBSESITY), morbid obesity (BMI above 40)(OBSESITYMORB), pregnancy(PREG). NONE is reported if there were no underlying conditions.

Country comments and specific information concerning hospitalised cases and mortality

This section is compiled from specific comments and published reports on the website where these are indicated by reporters. They are structured to represent influenza-associated hospitalisations (and some emergency hospital consultations), use of higher level care and mortality.

Czech Republic: [Link here](#) Influenza activity is still increasing. Up to the end of week 6/2011 a cumulative total of 96 SARI patients with laboratory-confirmed influenza A(H1N1)2009 have been reported by intensive care units and there have been 12 influenza deaths.

Denmark [SSI Link here](#) Up to 14 February (week 6/2011), a cumulative total of 122 influenza patients have been reported by ICUs in Denmark with a median age of 54 years (and a range from 1 week to 83 years). Nine patients were admitted to an ICU in week 6/2011 compared with 19 new admissions in week 5. There is still pressure on the wards, reflected by the proportion of ICU beds used for influenza patients. On Monday 14 February 2011 at 8:00 am, 33 influenza patients were in ICUs, corresponding to 9.6% of the total number of occupied ICU beds in the country. This is compared with 10.0% the week before. Of the ICU patients, 102 were diagnosed with influenza A, 38 of whom were reported to be further subtyped as subtype H1N1. Twenty patients had an influenza B infection. Eight patients with influenza A and two patients with influenza B received extracorporeal membrane oxygenation (ECMO). Fifteen patients with confirmed influenza A and five with influenza B died. Nineteen patients were reported to be previously healthy and for another 33 patients no underlying condition was reported. For 70 patients one or more underlying conditions were described. One influenza patient was reported to be pregnant.

France: [INVS Link Here](#) By week 6 in the sentinel network of hospitals *Oscour* 1 353 emergency consultations for influenza-like illness had been reported with 90 hospitalisations, which is an increase from week 5. In the national network of paediatric and adult ICUs the numbers have been decreasing since week 01/2011. Considered cumulatively, 611 ICU influenza cases have been reported from ICUs with influenza A(H1N1)2009 predominating, and around 70% of cases being between 15 and 64 years of age. A clinical risk factor is reported for most cases, conversely 37% of these severe cases were reported to have no identified risk factor. In this network there have been 84 deaths reported, which represents 14% of reports.

Ireland: [HPSC influenza link here](#) For the 2010/2011 season to date (16 February 2011), 884 confirmed influenza cases have been hospitalised, of these 118 cases have been admitted to intensive care units and 18 deaths have been reported to HPSC. At the peak, this represented 1.1/10⁵ population cases requiring higher level (intensive) care but figures have declined considerably since then. As of 16 February, 21 of the hospitalised cases remained in intensive care on 16 February compared with 31 a week before. Eighty-six of the 118 intensive care cases (76%) had underlying medical conditions. The underlying medical conditions include: chronic respiratory disease, chronic heart disease, immunosuppression, pregnancy, metabolic disorders and morbid obesity. HPSC has been informed of 22 influenza-associated deaths to date this season (as of 16/02/2011). Of the deaths: 17 had influenza A(H1N1)2009, one combined influenza A and B infections and three influenza B. One death was in a patient in the 0–4 year age group, 16 patients were in the 15–64 year age group and five patients were aged 65 years and older.

Malta: [Link here](#) Situation unchanged.

The Netherlands [RIVM influenza link here](#) Between 4 October 2010 and week 6 (16 February), a cumulative total of 584 hospitalised patients were reported as infected with A(H1N1)2009 influenza virus. There were 35 fatalities notified. The largest numbers of hospitalised admissions with influenza have been in children in the age group 0–5 years. Of the 584 patients with laboratory-confirmed influenza A (H1N1)2009 there were 32 pregnant women and 562 with information on the underlying condition. Underlying conditions were reported in 46% of these. This percentage rose to 53% of 447 patients over 5 years of age.

Norway: [FHI Link here](#) To 16 February the total of hospitalised influenza cases is 141 (admitted to ICU: 32). By age group: age 0–4 years hospitalised: 28 (to ICU: 3); age 5–14 years hospitalised: 2 (to ICU: 1); age 15–29 hospitalised: 19 (to ICU: 1); age 30–64 years hospitalised: 83 (to ICU: 25) and age 65 years and over hospitalised: 9 (in ICU: 2).

Romania: [Link here](#) Since the start of the season, influenza A(H1N1)2009 virus was detected in 39 of the 217 reported SARI cases, seven of these cases during week 06/2011, and influenza B virus was detected in 18 cases, four cases during week 06/2011. From week 40/2010 to week 06/2011, 16 deaths were reported, eight positive for A(H1N1)2009 virus, one positive for B virus and one positive for *Streptococcus pneumoniae*. During week 06/2011 two deaths were reported, one positive for A(H1N1)2009 virus, one positive for B virus. None of the influenza positive SARI cases reported during the season had been vaccinated for influenza.

Spain: [ISCIH Influenza Link here](#) In Spain, information concerning severe illness due to influenza infection with associated admission to hospitals comes from a dedicated surveillance system developed during the 2009/2010 pandemic season. Since week 40/2010 and up to week 06/2011 1 059 severe hospitalised confirmed influenza

cases have been reported. Severely affected cases were mostly in the 15 to 64 year age groups (66%). Conversely 13% were less than five years old. Of 944 cases with outcome information available 106 died (13% with no known risk factors). Of the severe cases 662 had information available on the status of influenza vaccination for the 2010/2011 season and only 89 (13%) cases had been immunised. Monovalent pandemic vaccines 2009 were reported to have been received by only 8% of hospitalised cases (41/504). Among those hospitalised, 80% of the cases included were in groups which were recommended influenza vaccination (chronic diseases / pregnancy / obesity / being older than 60 years) and had not been vaccinated this season.

UK: [HPA Influenza Link](#) and [DH \(England\) Link](#) In week 7, the number of patients in England with confirmed or suspected influenza in critical care beds have declined further from its peak of nearly 800 (equivalent to 1.4 per 10⁵ population) to around 70 cases on 17 February. Up to 16 February 2011, 494 deaths have been reported in individual influenza cases from across the UK. Ninety-three per cent of the cases with additional information were associated with A(H1N1) 2009 1% with untyped influenza A and 6% with influenza B infection. Reported deaths associated with influenza have been mainly in younger adults and children. Amongst cases with information on age, 4% have been less than 5 years; 4% between 5 to 14 years; 72% from 15 to 64 years and 20% were 65 years or older. Of those with available information 70% were in one of the clinical risk groups where vaccination is recommended, which includes pregnant women. The most numerous reported clinical risk factors were underlying respiratory disease including asthma and immunosuppression. Of cases with information on immunisation history 72% had not received the 2010 trivalent vaccine and 95% had not received the monovalent pandemic vaccine last season. All-cause all-age deaths (due to multiple causes not just influenza) declined again in week 4 and is now well below the upper statistical limit of expected levels for this time of year.

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). Additionally the report is reviewed by experts of WHO regional office Europe.

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.

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