

# ECDC SURVEILLANCE REPORT

## Weekly influenza surveillance overview

Updated September 15 2009, 9:42 AM CEST

### Main surveillance developments in week 36

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

- Sporadic or local activity in a number of European countries due to A(H1N1) 2009. Rates are declining in parts of the UK following their earlier peak but, in Sweden, influenza activity is reported to be widespread, at medium levels and rising.
- There is very little co-circulation of seasonal influenza A(H3) or B viruses reported and no circulating viruses that are resistant to oseltamivir or zanamivir.

NOTE: As the switch from the Early Warning Response System (EWRS) to the European Surveillance System (TESSy) is in the final stages, there may be some differences in the totals between the daily updates as some countries reported to the former, some to the latter and some to both. This will be resolved in the next few weeks.

**Sentinel surveillance of influenza-like illness (ILI)/acute respiratory infection (ARI):** Sweden remained the only country reporting widespread influenza activity at medium levels and with an increasing trend. Most other European countries continue to see low local activity or sporadic cases. For more information [click here](#).

**Virological surveillance:** The proportion of influenza-positive sentinel samples continues to oscillate around 15%, most of it attributable to influenza A(H1N1)v. For more information [click here](#).

**Aggregate numbers of pandemic (H1N1) 2009:** Seventeen countries reported 2 390 newly diagnosed probable and confirmed cases of influenza A(H1N1)v, with Germany accounting for 66% of this total. Malta and Sweden reported one death each. For more information [click here](#).

**Hospital surveillance of severe acute respiratory infection (SARI):** No data are available yet. For more information [click here](#).

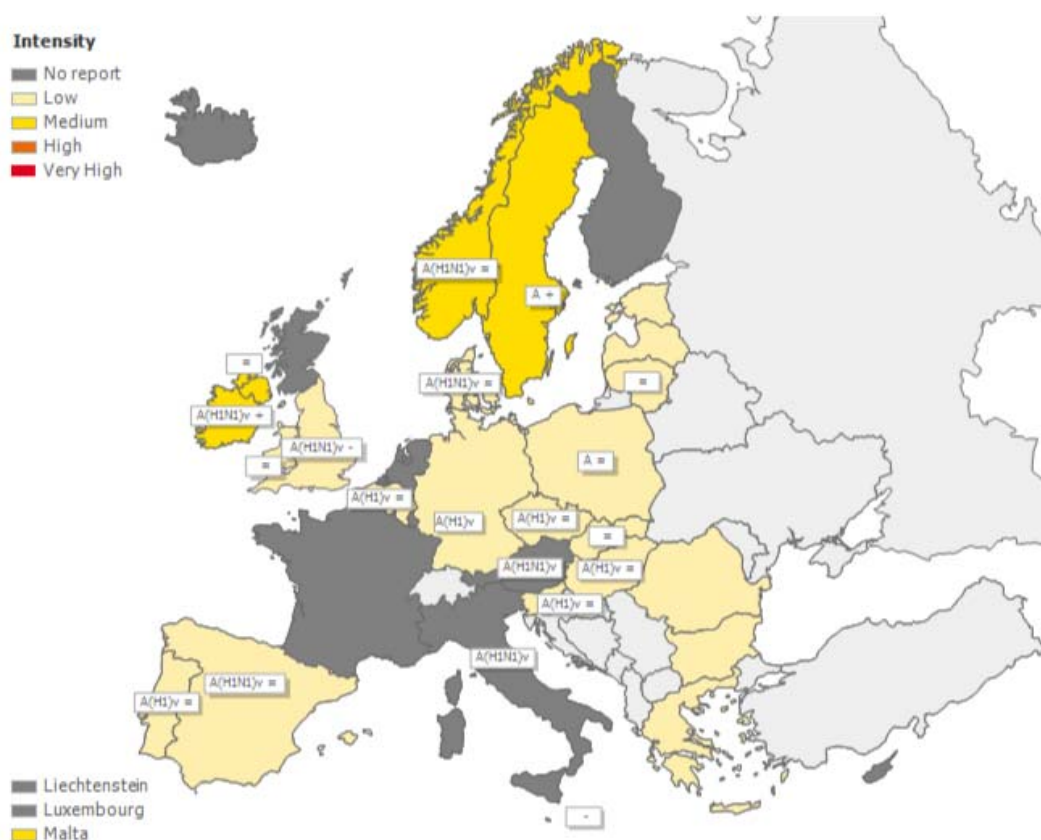
**Mortality surveillance:** No EURO MOMO data are available yet. For more information [click here](#).

**Qualitative reporting:** No qualitative indicator data are available yet. For more information [click here](#).

## Sentinel surveillance (ILI/ARI)

This surveillance is based on nationally organised sentinel networks of physicians, mostly general practitioners (GPs), representing 1–5% of GPs working in their countries. All EU/EEA Member States except Cyprus, Iceland and 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 and allow a semi-quantitative assessment of intensity, geographic spread and trend of influenza activity.

Map 1: Intensity for the current week 36



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

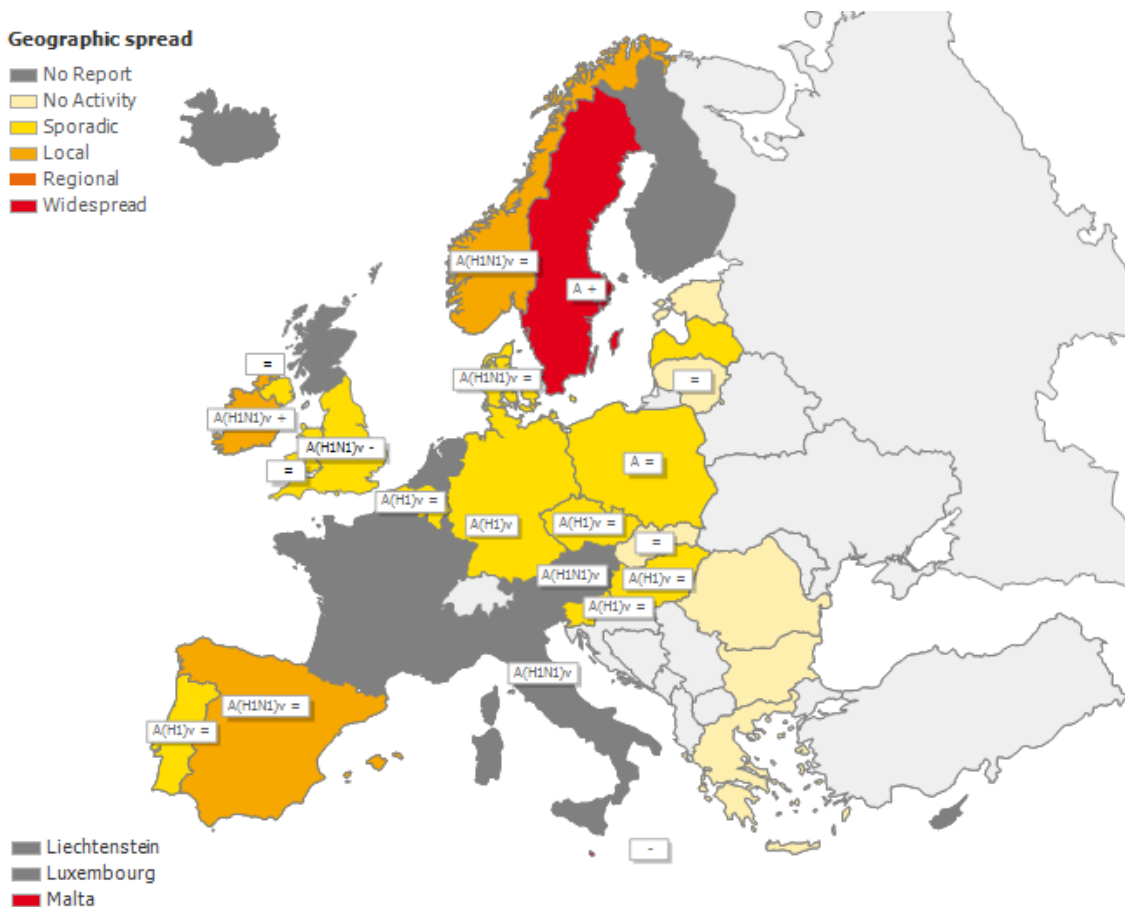
Legend:

<b>High</b>	Higher than usual levels of influenza activity	-	Decreasing clinical activity
<b>Low</b>	No influenza activity or influenza at baseline levels	+	Increasing clinical activity
<b>Medium</b>	Usual levels of influenza activity	=	Stable clinical activity
<b>Very high</b>	Particularly severe levels of influenza activity	<b>A</b>	Type A
		<b>A(H1)v</b>	Type A, Subtype H1v
		<b>A(H1N1)v</b>	Type A, Subtype H1N1v

### Map 2: Geographic spread for the current week 36

**Geographic spread**

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



- Liechtenstein
- Luxembourg
- Malta

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

**Legend:**

<b>Local outbreak</b>	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)	-	Decreasing clinical activity
<b>No activity</b>	No evidence of influenza virus activity (clinical activity remains at baseline levels)	+	Increasing clinical activity
<b>Regional activity</b>	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)	=	Stable clinical activity
<b>Sporadic</b>	Isolated cases of laboratory confirmed influenza infection	<b>A</b>	Type A
<b>Widespread</b>	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>A(H1)v</b>	Type A, Subtype H1v
		<b>A(H1N1)v</b>	Type A, Subtype H1N1v

**Table 1: Epidemiological and virological overview by country, week 36**

Country	Intensity	Trend	Geographic spread	No. of sentinel swabs	Percentage positive *	Dominant Type	ILI per 100.000	ARI per 100.000
Austria				12	16.7	A(H1N1)v		
Belgium	Low	Stable	Sporadic	84	6.0	A(H1)v	76.2	764.1
Bulgaria	Low	Stable	No activity	0	-	None		297.0
Czech Republic	Low	Stable	Sporadic	27	11.1	A(H1)v	6.8	402.9
Denmark	Low	Stable	Sporadic	12	0.0	A(H1N1)v	57.8	0.0
Estonia	Low	Increasing	No activity	2	0.0	None	1.0	92.8
Germany	Low	Stable	Sporadic	43	4.7	None		508.7
Greece	Low	Stable	No activity	0	-	None	40.8	
Hungary	Low	Stable	Sporadic	9	22.2	A(H1)v	142.3	
Ireland	Medium	Increasing	Local	34	23.5	A(H1N1)v	37.4	
Italy				0	-	A(H1N1)v		
Latvia	Low	Stable	Sporadic	0	-	None	0.0	163.7
Lithuania	Low	Stable	No activity		-		0.0	102.1
Luxembourg				16	6.3	A(H1)v		
Malta	Medium	Decreasing	Widespread		-		9,746.3	
Netherlands				24	8.3	None		
Norway	Medium	Stable	Local	27	7.4	A(H1N1)v	229.6	
Poland	Low	Stable	Sporadic	0	-	A	6.9	0.0
Portugal	Low	Stable	Sporadic	0	-	A(H1)v	2.4	
Romania	Low	Stable	No activity	18	0.0	None	1.0	517.9
Slovakia	Low	Stable	No activity		-		47.9	577.4
Slovenia	Low	Stable	Sporadic	12	33.3	A(H1)v	7.0	461.6
Spain	Low	Stable	Local	249	26.9	A(H1N1)v	51.7	
Sweden	Medium	Increasing	Widespread	96	10.4	A	19.3	
UK - England	Low	Decreasing	Sporadic	29	10.0	A(H1N1)v	8.6	184.1
UK - Northern Ireland	Medium	Stable	Sporadic		-		56.6	180.4
UK - Wales	Low	Stable	Sporadic		-		9.7	
<b>Europe</b>				<b>694</b>	<b>15.9</b>			

\* Based on sentinel data

A link to country-specific graphs will be made available shortly.

## Weekly analysis

In week 36, 20 countries reported epidemiological data. For the intensity indicator – national network levels for influenza-like illness (ILI) and/or acute respiratory infection (ARI) – Ireland, Malta, Norway and Sweden reported medium activity and all other countries reported low activity. For the geographic spread indicator, widespread activity was reported in Sweden and local activity in Ireland, Norway and Spain. The remaining countries reported sporadic or no activity. Estonia, Ireland and Sweden saw an increasing trend while Malta reported a decreasing trend. Levels of activity remained unchanged for the remaining 16 countries that reported in this week.

Since week 16/2009, influenza activity above baseline levels has been reported in the following locations: the UK (England) since week 27/2009, Ireland since week 30/2009, the UK (Northern Ireland) since week 31/2009, Norway since week 34/2009, Sweden since week 35/2009 and Malta since week 36/2009. In the UK (England), influenza activity was high in weeks 28–30, decreased to medium levels in week 32 and to low levels in week 33. Influenza activity remained at medium levels in week 36 in Ireland, Norway and Sweden, but appeared to be increasing only in Ireland and Sweden. In most locations where influenza activity rose above baseline levels this summer, the most affected age group included those aged 15–64 years. Only in the UK (England) and Malta did children younger than 15 years have the highest ILI consultation rates. It should be mentioned that the activity in August is difficult to comment on as, during this month, any normal activity is unusual.

## Virological surveillance

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.

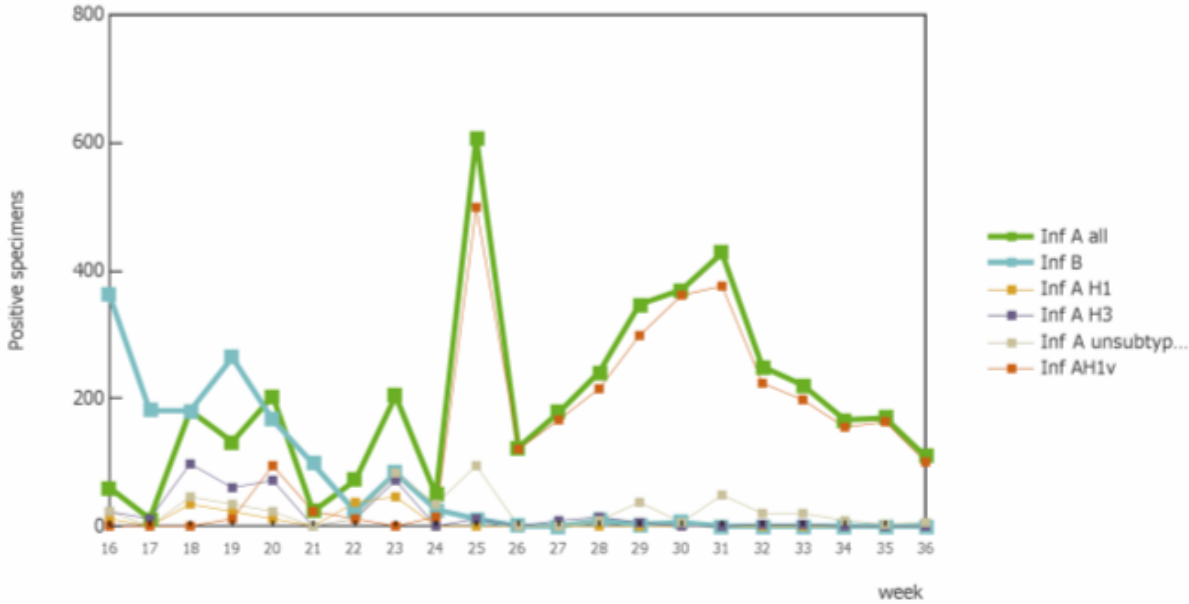
Since week 31/2009, the characterisations of the pandemic virus as A/California/7/2009 (H1N1)v-like were included in the report to be in line with the current virus strains recommended by WHO for vaccine preparation. For details [click here](#).

**Table 2: Weekly and cumulative influenza virus detections by type, subtype and surveillance system for week 36 and the season 2008/2009.**

Virus type/subtype	Current Week		Season	
	Sentinel	Non-sentinel	Sentinel	Non-sentinel
Influenza A	110	822	11821	33142
A (pandemic H1N1)	100	727	1710	13009
A (subtyping not performed)	8	83	3002	14240
A (not subtypable)	0	0	0	17
A (H3)	0	6	6769	5467
A (H1)	2	6	340	417
Influenza B	0	4	2457	2911

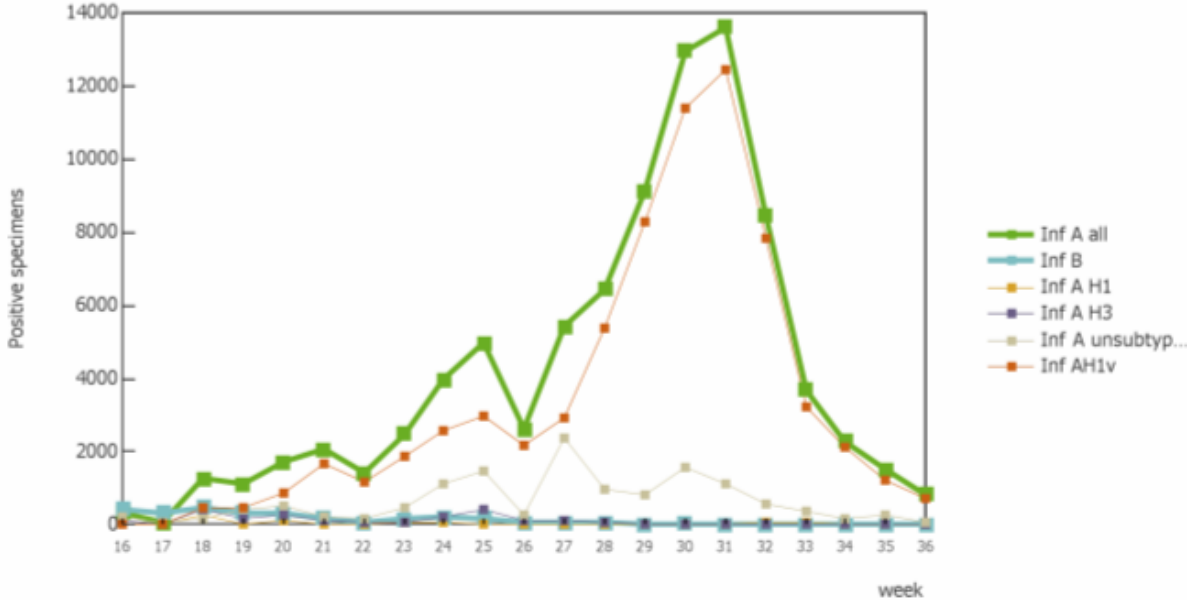
**Figure 1: Number of sentinel specimens positive for influenza, by type, subtype and week of report, weeks 16–36**

Sentinel data of number of specimens positive for influenza viruses A and B



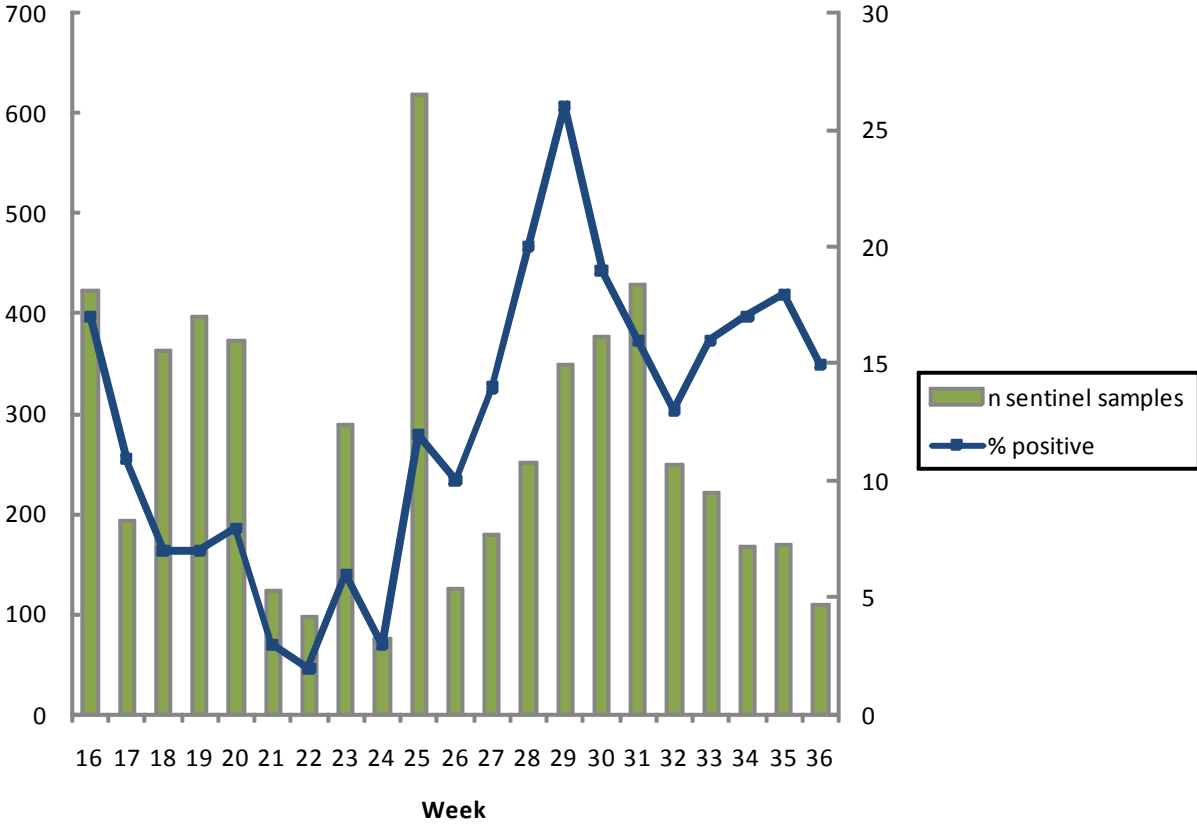
**Figure 2: Number of non-sentinel specimens positive for influenza, by type, subtype and week of report, weeks 16–36**

Non-sentinel data of number of specimens positive for influenza viruses A and B



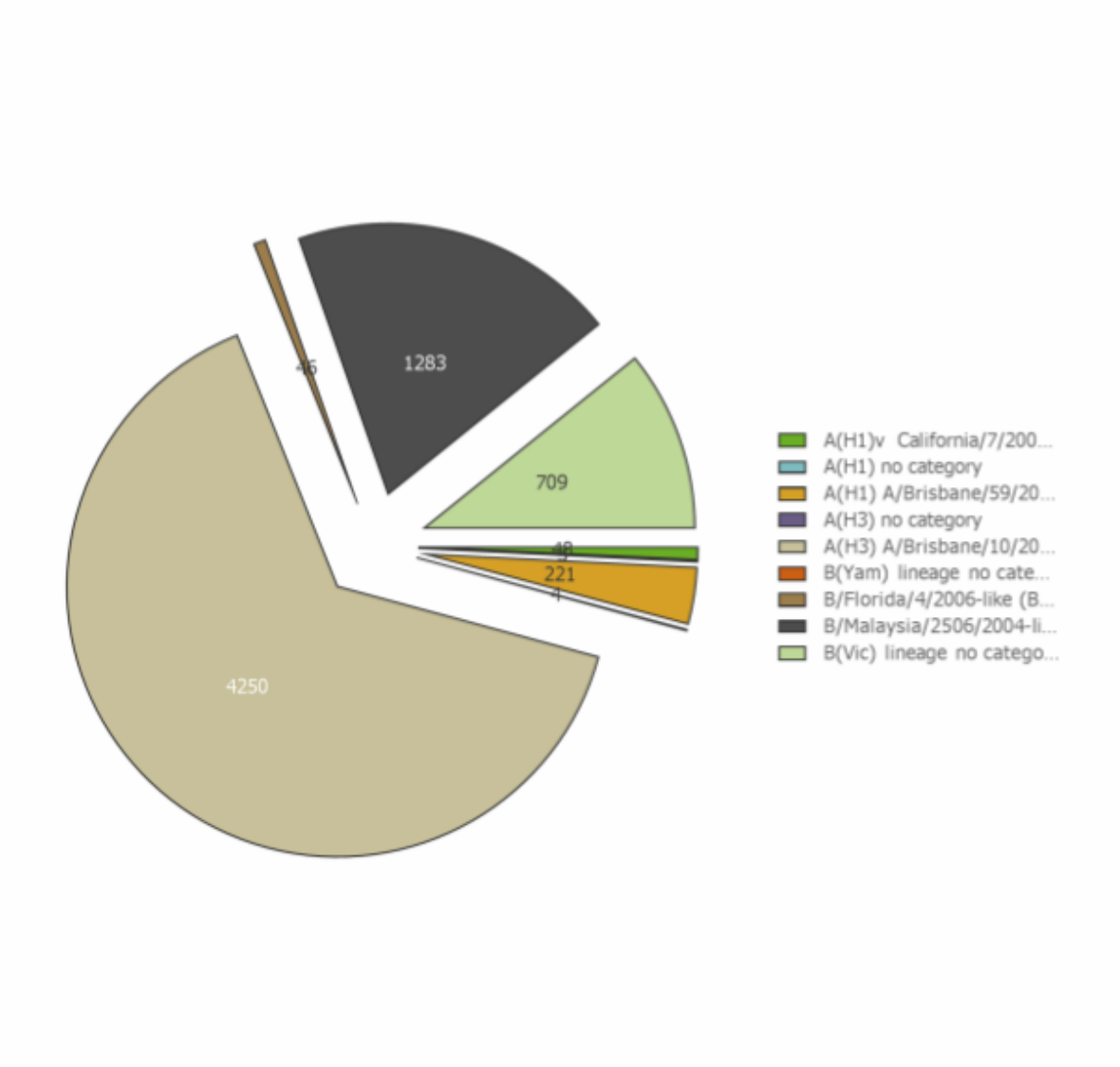


**Figure 3: Proportion of sentinel samples positive for influenza, by week of report, weeks 16–36**



**Figure 4: Results of antigenic characterisations of sentinel and non-sentinel influenza virus isolates since week 40/2008**

Combined sentinel and non-sentinel data of cumulative influenza virus isolate antigenic strain characterisations



**Table 3: Antiviral resistance by influenza virus type and subtype, weeks 40/2008–36/2009**

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)	653	0	612	0	644	644 (100%)
A(H1N1)	260	256 (98%)	260	0	124	1 (1%)
A(H1N1)v	424	0	415	0	56	56 (100%)
B	117	0	113	0		

### Weekly analysis

In week 36, 21 countries reported virological data. Sentinel physicians collected 694 respiratory specimens, of which 110 (16%) were positive for influenza virus (Table 1). In addition, 826 non-sentinel source specimens (e.g. specimens collected for diagnostic purposes in hospitals) were reported positive for influenza virus. Table 2 shows the distribution of sentinel and non-sentinel source specimens by type and subtype; figures 1–3 show the temporal trends. The number of positive non-sentinel specimens peaked in week 31. The proportion of positive sentinel specimens that should be largely independent of national testing strategies show two peaks in weeks 29 and 35.

Based on the antigenic and/or genetic characterisation of 11 756 influenza viruses reported from week 40/2008 to week 36/2009, 7 983 (68%) were reported as A/Brisbane/10/2007 (H3N2)-like, 484 (4%) as A/Brisbane/59/2007 (H1N1)-like, 93 (1%) as B/Florida/4/2006-like (B/Yamagata/16/88 lineage), 2 965 (25%) as B/Malaysia/2506/2004-like or B/Brisbane/60/2008-like (B/Victoria/2/87 lineage) and 231 (2%) as A/California/7/2009 (H1N1)v-like. Figure 4 shows the results of antigenic characterisations of sentinel and non-sentinel influenza virus isolates since week 40/2008.

Among reported A(H1N1)v viruses tested so far, resistance to M2 inhibitors was observed in all viruses, while sensitivity to oseltamivir and zanamivir was characterised in all strains. Reports from other sources confirm that resistance of the A(H1N1)v virus to neuraminidase inhibitors remains very rare.

## Aggregate numbers of pandemic (H1N1) 2009 cases and deaths

Aggregate numbers of both probable and laboratory-confirmed cases of pandemic influenza and deaths due to pandemic influenza are reported by countries still collecting this data.

**Table 4: Aggregate numbers of pandemic (H1N1) 2009 cases and deaths**

### Weekly analysis

In week 36, 17 countries reported 2 390 newly diagnosed probable and confirmed cases of influenza A(H1N1)v, with Germany accounting for 66% of this total. Malta and Sweden reported one death each. The cumulative number of cases and deaths since the beginning of the pandemic in EU/EEA Member States amounts to 42 232 and 43 respectively.

Differences compared to the ECDC daily pandemic (H1N1) 2009 update are due to the fact that many countries are reporting exclusively to the EWRS as long as the switch to TESSy has not been officially announced.

Country	Weekly		Cumulate	
	Cases	Death	Cases	Death
Austria	28	0	330	0
Belgium	-	-	126	0
Bulgaria	1	0	64	0
Cyprus	-	-	297	0
Czech Republic	26	0	269	0
Denmark	19	0	562	0
Estonia	64	0	125	0
Finland	9	0	222	0
France	-	-	464	0
Germany	1576	0	16835	0
Greece	-	-	1839	1
Hungary	-	-	151	1
Iceland	-	-	165	0
Ireland	0	0	767	2
Italy	-	-	618	0
Latvia	0	0	27	0
Lithuania	3	0	51	0
Luxembourg	-	-	0	0
Malta	27	1	390	2
Netherlands	-	-	1021	1
Norway	-	-	868	0
Poland	2	0	157	0
Portugal	414	0	2624	0
Romania	10	0	315	0
Slovakia	8	0	125	0
Slovenia	7	0	217	0
Spain	-	-	1308	4
Sweden	196	1	1136	2
United Kingdom	-	-	11159	30
<b>Total</b>	<b>2390</b>	<b>2</b>	<b>42232</b>	<b>43</b>

Countries shaded with grey are not recommending laboratory tests for all suspect cases, therefore comparisons in time or between these countries should not be made at present. Fatal cases are reported in the country where the death occurred.

## Hospital surveillance (SARI)

A number of Member States carry out hospital-based surveillance of severe acute respiratory infection (SARI) exhaustively or at selected sentinel sites. SARI surveillance serves to monitor the trends in the severity of influenza and potential risk factors for severe disease to help guide preventive measures and healthcare resource allocation.

In week 36, no SARI data was available yet.

## Mortality surveillance

Weekly all-cause mortality in Europe is monitored by the EURO MOMO project, a project coordinated by the Statens Serum Institut in Denmark. All-cause mortality has been shown to reflect influenza severity.

In week 36, no mortality data was available through EURO MOMO yet.

## Qualitative reporting

Qualitative monitoring will be an acceptable replacement for quantitative monitoring when reliable numbers are no longer available for reporting due to overburdened surveillance systems. The qualitative components will give some indication of influenza intensity, geographic spread, trend and impact.

In week 36, no qualitative indicator data was available yet.