

# Weekly Influenza Surveillance Report



Feidhmeannacht na Seirbhíse Sláinte  
Health Service Executive



**Week 16 2005**

**Week starting Monday 18<sup>th</sup> April 2005 &  
ending Sunday 24<sup>th</sup> April 2005**

**Report produced: 28/04/2005**

**This report is produced in collaboration with the Departments of Public Health**

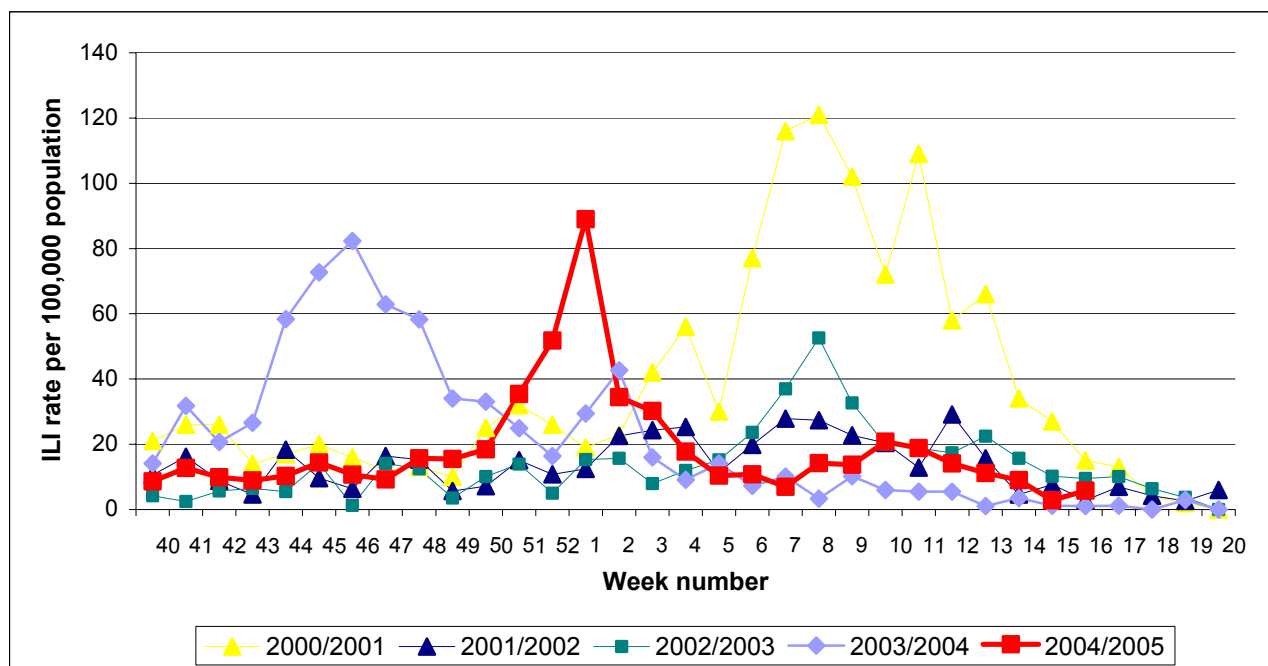
## Summary

Clinical influenza activity in Ireland increased during week 16 but remains at a low level, with five cases of influenza-like illness (ILI) reported by the sentinel general practices. Virological indicators were also low, with two influenza B detections. Clinical and virological indicators suggest that influenza viruses are no longer circulating in Europe in significant numbers.

## Clinical data

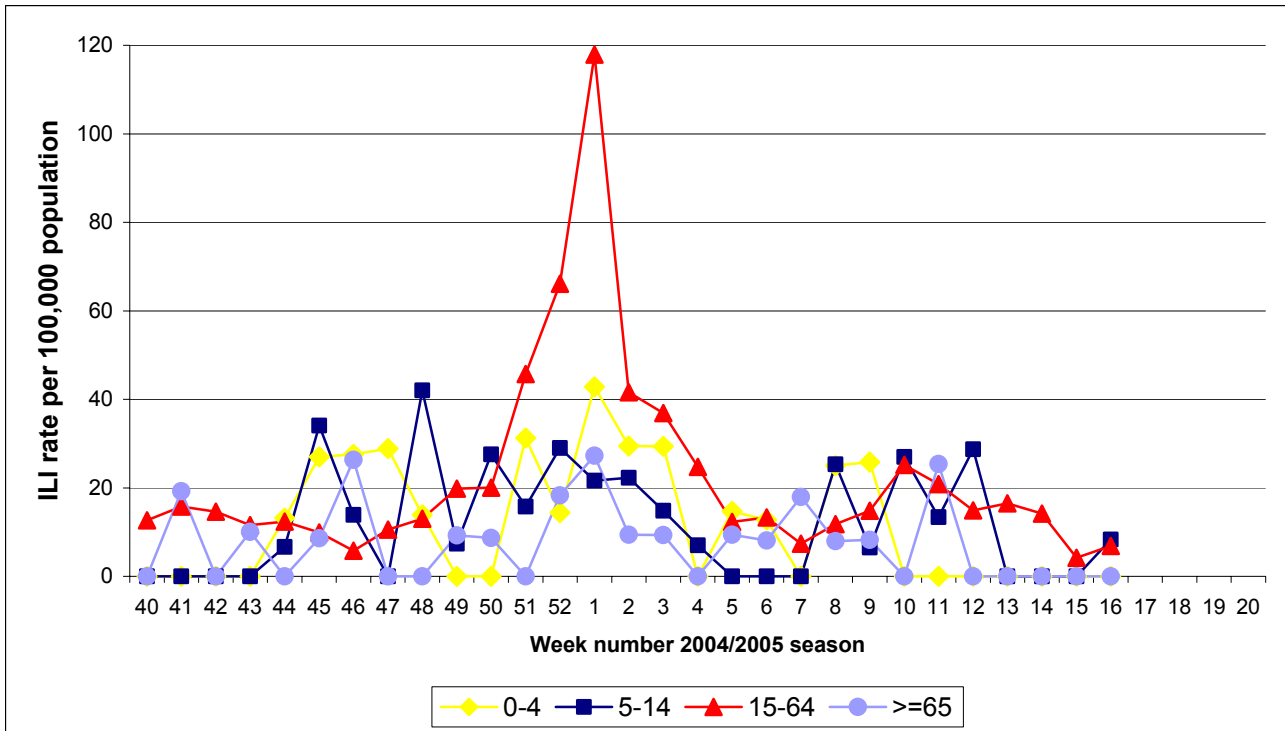
During week 16 (week ending 24<sup>th</sup> April 2005), five cases of ILI were reported by sentinel general practices, corresponding to an ILI consultation rate of 5.8 cases per 100,000 population (figure 1). This is an increase from the updated rate for week 15 of 2.8 per 100,000 population.

Four of the ILI cases were aged between 15 and 64 years and one was aged between five and 14 years. Returns were received from 27 out of 36 sentinel general practices, giving a population coverage of 2.2% (76% of the total possible reporting GP patient population). Five practices reported ILI.



**Figure 1.** GP consultation rate for ILI per 100,000 population by week, during the 2000/2001, 2001/2002, 2002/2003, 2003/2004 & 2004/2005\*\*-influenza seasons.

*\*\*Please note that for comparison with previous years, data for week 52 2004 on this graph represents the average of weeks 52/04 and 53/04*



**Figure 2.** Age specific GP consultation rate\* for ILI per 100,000 population by week\*\* for the 2004/2005-influenza season

\* Please note the denominator used in the age specific consultation rate is from the 2002 census data; this assumes that the age distribution of the sentinel general practices is similar to the national age distribution.  
 \*\*Please note that for comparison with previous years, data for week 52 2004 on this graph represents the average of weeks 52/04 and 53/04

**Virological data from the National Virus Reference Laboratory**

The National Virus Reference Laboratory (NVRL) received five swabs taken during week 16 by sentinel GPs (tables 1&3). Two tested positive for influenza B. The NVRL also tested 23 respiratory non-sentinel specimens, taken in hospitals during week 16, none of which were positive for influenza or RSV (tables 2&4, figure 3).

To date this season, 54 influenza A (unsubtyped), 63 influenza A (H3N2), 37 influenza A (H1N1) and 38 influenza B viruses have been detected by the NVRL (table 3). Twenty-seven of these were in the 0-4 age group, 25 were in the 5-14 age group, 121 were in the 15-64 age group and 17 were aged over 64 years. Of the 351 RSV detections to date, 202 were aged 6 months or less, 85 were aged between 7 and 11 months, 41 were aged between 1 and 4 years, and 17 were aged 5 years or older. Ages were unavailable for six of the RSV-positive patients and two of the influenza-positive patients.

**Table 1:** Total number of sentinel specimens tested for influenza and positive results by type and subtype for week 16 2005 and the 2004/2005 season to date

Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A (Unsubtyped)	Influenza A (H3N2)	Influenza A (H1N1)	Influenza B	RSV
16	5	2	40.0	0	0	0	2	0
Total	351	139	39.6	5	62	36	36	6

**Table 2:** Total number non-sentinel\* respiratory specimens and positive results by type and subtype for week 16 2005 and the 2004/2005 season to date

Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A (Unsubtyped)	Influenza A (H3N2)	Influenza A (H1N1)	Influenza B	RSV
16	23	0	0.0	0	0	0	0	0
Total	1385	53	3.8	49	1	1	2	345

\*Please note that non-sentinel specimens include all specimens referred to the NVRL, these specimens are mainly from hospitals and some GPs and may include more than one specimen from each case.

**Table 3:** Total number of sentinel and non-sentinel\* respiratory specimens and positive results for week 16 2005 and the 2004/2005 season to date

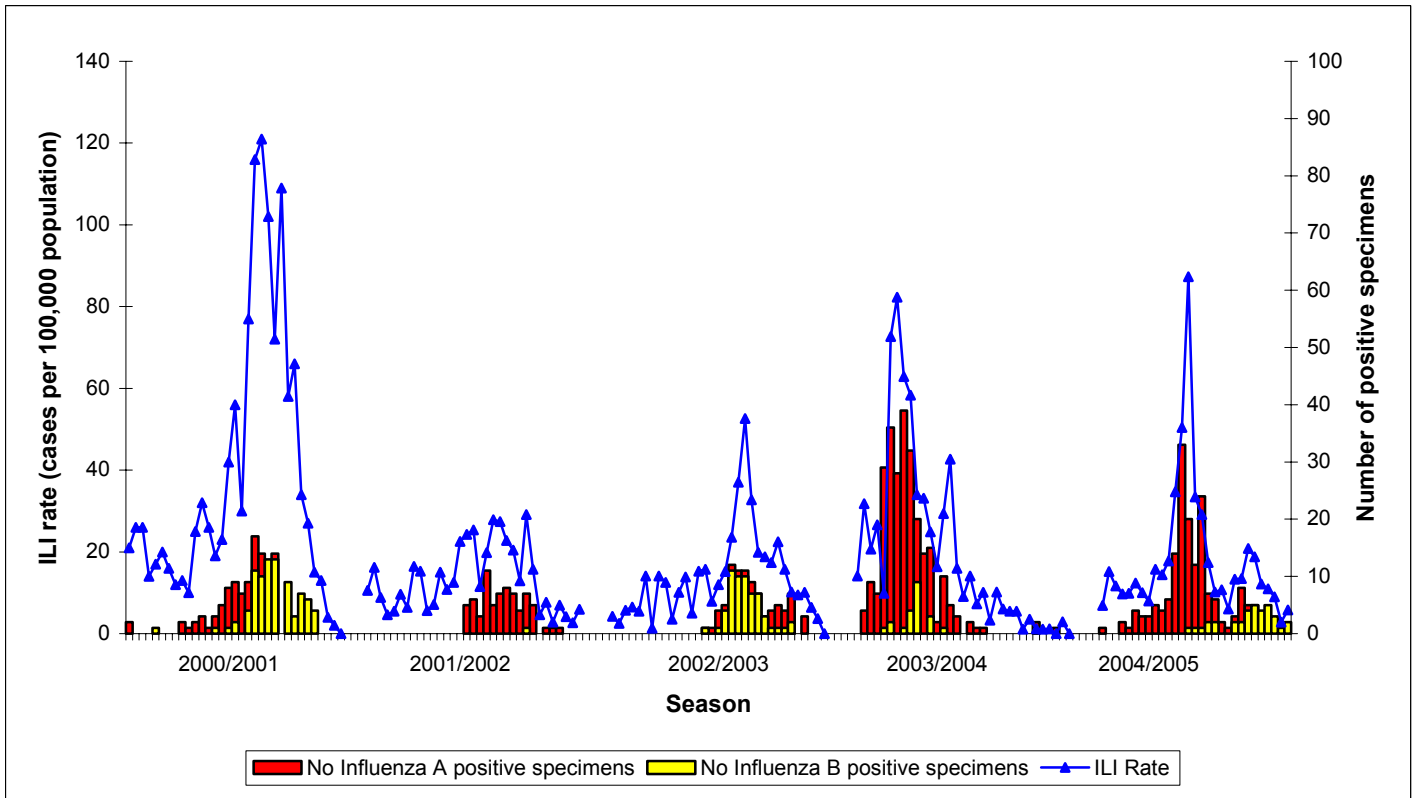
Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A (Unsubtyped)	Influenza A (H3N2)	Influenza A (H1N1)	Influenza B	RSV
16	28	2	7.1	0	0	0	2	0
Total	1736	192	11.1	54	63	37	38	351

\*Please note that non-sentinel specimens include all specimens referred to the NVRL, these specimens are mainly from hospitals and some GPs and may include more than one specimen from each case.

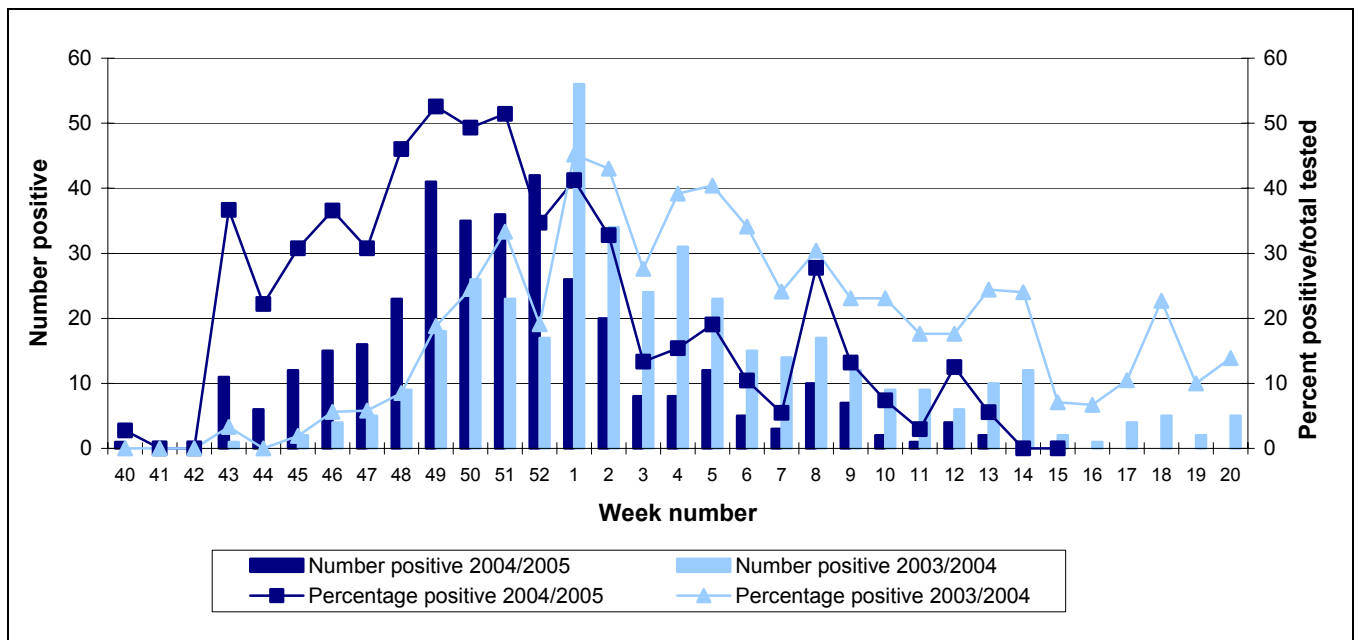
**Table 4:** Total number of sentinel and non-sentinel\* influenza A and B positive specimens by health board for week 16 2005 and the 2004/2005 season to date

	Week 16 2005			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
ERHA	0	1	1	61	19	80
MHB	0	0	0	6	1	7
MWHB	0	0	0	14	2	16
NEHB	0	0	0	9	3	12
NWHB	0	0	0	10	1	11
SEHB	0	1	1	26	6	32
SHB	0	0	0	11	2	13
WHB	0	0	0	17	4	21
<b>Total</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>154</b>	<b>38</b>	<b>192</b>

\* Please note that non-sentinel specimens include all specimens referred to the NVRL, these specimens are mainly from hospitals and some GPs and may include more than one specimen from each case.



**Figure 3.** ILI rate and number of positive specimens detected during the 2000/2001, 2001/2002, 2002/2003, 2003/2004 and 2004/2005 seasons.



**Figure 4.** Number and percentage of non-sentinel RSV positive specimens detected during the 2004/2005\*\* and 2003/2004 influenza seasons.

\*\*Please note that for comparison with previous years, data for week 52 2004 on this graph represents the average of weeks 52/04 and week 53/04

### **Antigenic characterisation**

Three specimens have been characterised to date this season. One influenza A (H1N1) isolate has been antigenically characterised as A/New Caledonia/20/99-like. The current season's vaccine contains an A/New Caledonia/20/99(H1N1)-like virus and should provide good protection against the strain. One influenza A (H3N2) isolate was found to be closest in antigenic character to the reference viruses A/Shantou/1219/04 and A/Oslo/807/04. A/Shantou/1219/04-like strains have been found to be closely related to the newer reference strain A/California/7/04 (H3N2). The A/California/7/04(H3N2)-like isolates have reduced titres to the A/Fujian/411/02-like antisera, but the H3N2 component of the current vaccine is expected to provide some protection against this new variant. One influenza B isolate has been antigenically characterised as being closely related to B/Jiangsu/10/03. B/Jiangsu/10/2003 is included in the current vaccine (as a B/Shanghai/361/2002-like virus).

### **Outbreak reports**

A school outbreak of influenza-like illness occurred during week 16 in the HSE – Midland area. A total of 32 pupils were reported ill. There were no hospitalisations. Influenza B, which is currently the dominant strain in Europe, was isolated from five cases.

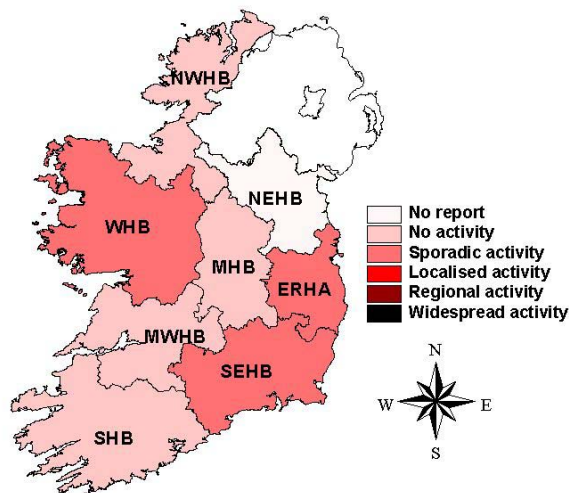
Two other influenza outbreaks have been reported this season. An outbreak of influenza A (H3N2) in a long-stay care facility for the elderly was reported by the HSE – Eastern region during week three. Thirty-seven patients and 19 staff members were affected, corresponding to an attack rate of 33.4%. A school outbreak of influenza-like illness occurred during week 48 in the HSE – Mid Western area. A total of 32 pupils were reported ill. There were no hospitalisations. Influenza A (unsubtyped) was isolated from two cases.

### **Mortality data**

No influenza deaths were reported to the HPSC during week 16.

### **Influenza activity by health board/authority**

Influenza activity is reported on a weekly basis from the Departments of Public Health. Influenza activity is based on sentinel GP ILI consultation rates, laboratory-confirmed cases of influenza, sentinel hospital admissions data and/or sentinel school absenteeism data. During week 15, three areas reported sporadic activity, four reported no activity and data was unavailable for one area.



**Figure 5:** Map of influenza activity by health board/authority during week 15 2005

### **Influenza activity in Northern Ireland**

Clinical influenza and ILI rates continued to decrease in Northern Ireland during week 16. Three cases of clinical influenza and 18 cases of ILI were reported, corresponding to a combined rate of 17.6 cases per 100,000 population. Returns were received from 19 of the 24 sentinel GP practices, giving a population coverage of 7%. There were no reports from virology sources of influenza detections.

<http://www.cdscni.org.uk//>

### **Influenza activity in England, Scotland and Wales**

Levels of influenza activity in England were low during week 15, with clinical indicators well within baseline levels. Scotland and Wales also reported low levels of influenza and influenza-like illness, with rates well within their respective baseline thresholds. Virological indicators were also low, with three influenza B detections from community samples sent to ERNVL, during weeks 14/05 and 15/05.

<http://www.show.scot.nhs.uk/scieh/infectious/respiratory/influenzasurveillance/influenzasurveillance.htm>

[http://www.hpa.org.uk/infections/topics\\_az/influenza/flu.htm](http://www.hpa.org.uk/infections/topics_az/influenza/flu.htm)

### **Influenza activity in Europe**

Influenza activity was low in all countries except Lithuania (medium) during week 15. Norway reported a widespread outbreak and local outbreaks were reported by Romania and

Latvia. The remaining countries reported sporadic or no influenza activity. Twenty-three sentinel swabs and 97 non-sentinel swabs tested positive for influenza. Of these, 34 (28.3%) were influenza A (unsubtyped), 5 (4.2%) were influenza A (H1), 14 (11.7%) were influenza A (H3), 1 (0.8%) was influenza A (H3N2) and 66 (55%) were influenza B.

Three thousand, seven hundred and eighty six influenza viruses have been antigenically or genetically characterised in Europe between week 40 2004 and week 15 2005. Of the 2392 H3N2 viruses characterised, 1450 (60.6%) were A/Wellington/1/2004 (H3N2)-like, 829 (34.7%) were A/California/7/04 (H3N2)-like, 111 (4.6%) were A/Fujian/411/2002 (H3N2)-like and two (0.1%) were A/Panama/2007/99 (H3N2)-like. All of the 739 characterised H1N1 viruses were A/New Caledonia/20/99 (H1N1)-like. Three hundred and fifty (53.6%) of the influenza B viruses were B/Jiangsu/10/2003-like and 303 (46.4%) were B/Hong Kong/330/2001-like.

To date this season, influenza A (H3N2), influenza A (H1N1), influenza A (H1N2) and influenza B have been detected in Europe. The dominant virus type has been influenza A, accounting for 81.0% of detections. Where influenza A viruses have been subtyped, 86.2% were influenza A (H3) and 13.8% were influenza A (H1N1). <http://www.eiss.org/>

### **Influenza activity in Canada**

Influenza detections, ILI and outbreaks continued to decline in Canada during week 15 (week ending 16/04/2005). Widespread influenza activity continued in two regions in Ontario. Elsewhere, localised, sporadic or no activity was reported. Sentinel physicians reported 14 cases of ILI per 1,000 patient visits. The Public Health Agency of Canada received 1,951 reports of laboratory tests for influenza during week 15, including 39 influenza A detections and 122 influenza B detections. Since the start of the 2004/2005 influenza season, 991 influenza viruses have been antigenically characterised. Of the 840 influenza A (H3N2) viruses tested, 420 were characterised as A/Fujian/411/02-like before the new variant, A/California/7/04 was reported. Since the antiserum of the new variant became available, 420 influenza A isolates have been characterised of which 328 (78%) were A/California/7/04-like and 92 (22%) were A/Fujian/411/02-like. Of the 151 influenza B viruses characterised, 126 (83%) were B/Shanghai/361/02-like and 25 (17%) B/ Hong Kong /330/2001-like.

<http://www.phac-aspc.gc.ca/fluwatch/index.html>

### **Influenza activity in the United States**

Influenza activity in the US peaked in February and continued to decline during week 15 (week ending 16/04/2005). The proportion of patient visits to sentinel providers for influenza-like illness (ILI) was below the national baseline. The proportion of deaths attributed to pneumonia and influenza was 7.8%, which is below the national epidemic threshold level of 7.9% for week 15. During week 15, one state reported regional influenza activity and the remaining states reported local, sporadic or no activity.

WHO and NREVSS laboratories tested 817 specimens for influenza during week 15. Four of these were positive for influenza A (H3N2), nine were positive for influenza A (unsubtyped) and 37 were positive for influenza B. Since October 1<sup>st</sup>, 755 influenza viruses have been antigenically characterised by the CDC. One hundred and fifty-four (20%) influenza A (H3N2) viruses were characterised as antigenically similar to the A/Wyoming/3/2003 and 356 (80%) were more closely related to A/California/7/2004 (H3N2). One hundred and sixty (66.9%) of the influenza B viruses isolated were characterised as B/Shanghai/361/2002-like and 26 (10.9%) showed a reduced reaction to B/Shanghai/361/02 ferret antisera. The



remaining 53 (22.2%) influenza B viruses were characterised as belonging to the B/Victoria lineage. All six influenza A (H1N1) viruses were characterised as antigenically similar to the haemagglutinin of the vaccine strain A/New Caledonia/20/99.

<http://www.cdc.gov/flu/weekly/>

### **Influenza activity Worldwide**

During week 16, a local outbreak was reported by Japan and sporadic activity was reported by Argentina, China, Mexico and Thailand.

<http://rhone.b3e.jussieu.fr/flunet/www/>

### **Avian influenza**

There were no human cases of avian influenza reported to the WHO in week 16. During week 15, the Ministry of Health in Viet Nam provided the WHO with official confirmation of eight human cases of H5N1 avian influenza. Two of these are recent cases and are still alive. Further details on the other six cases are being sought. Despite the continued incidence of human cases of H5N1 influenza, the Vietnamese agriculture ministry reported that outbreaks in poultry have greatly declined. The official number of laboratory-confirmed human cases of avian influenza A (H5N1) in Thailand (n=17), Viet Nam (n=68) and Cambodia (n=3) since January 2004 is now 88. Fifty one (58%) of these cases were fatal.

Although the avian influenza H5N1 virus is highly pathogenic in humans, there is currently no evidence of efficient and sustained human-to-human transmission. For further information on the avian influenza outbreaks please consult the following websites:

HPSC: <http://www.hpsc.ie/DiseaseTopicsA-Z/AvianInfluenza/>

WHO: [http://www.who.int/csr/disease/avian\\_influenza/en/](http://www.who.int/csr/disease/avian_influenza/en/)

[CIDRAP](#) (Centre for Infectious Disease Research and Policy, University of Minnesota)

### **Northern Hemisphere influenza vaccine for 2004/2005**

The vaccine currently in use is in accordance with the WHO recommendations on the composition of influenza vaccines for use in the 2004-2005 Northern Hemisphere influenza season, which are:

- an A/New Caledonia/20/99(H1N1)-like virus
- an A/Fujian/411/2002(H3N2)-like virus<sup>a</sup>
- a B/Shanghai/361/2002-like virus<sup>b</sup>

<sup>a</sup> The currently used vaccine virus is A/Wyoming/3/2003. A /Kumamoto/102/2002 is also available as a vaccine virus.

<sup>b</sup> Candidate vaccine viruses include B/Shanghai/361/2002 and B/Jilin/20/2003, which is a B/Shanghai/361/2002-like virus.

### **Northern Hemisphere influenza vaccine for 2005/2006**

The WHO announced its recommendations for the composition of the influenza vaccine for the northern hemisphere for 2005/2006 on February 10<sup>th</sup> 2005. The members of the WHO Collaborating Centres on Influenza recommended that influenza vaccines contain the following strains:

- an A/New Caledonia/20/99(H1N1)-like virus
- an A/California/7/2004(H3N2)-like virus<sup>a</sup>
- a B/Shanghai/361/2002-like virus<sup>b</sup>

*a Candidate vaccine viruses are being developed (for further information please see WHO update at <http://www.who.int/influenza>)*

*b The currently used vaccine viruses are B/Shanghai/361/2002, B/Jiangsu/10/2003 and B/Jilin/20/2003.*

<http://www.who.int/csr/disease/influenza/vaccinerecommendations1/en/>  
[www.emea.eu.int](http://www.emea.eu.int)

**Weekly influenza reports and further information on influenza are available on the HPSC website:**

<http://www.hpsc.ie/Publications/InfluenzaWeeklySurveillanceReport/>  
<http://www.hpsc.ie/DiseaseTopicsA-Z/InfluenzaFlu/>