

# Weekly Influenza Surveillance Report



Feidhmeannacht na Seirbhíse Sláinte  
Health Service Executive



**Week 10 2005**

**Week starting Monday 7<sup>th</sup> March 2005 &  
ending Sunday 13<sup>th</sup> March 2005**

**Report produced: 17/03/2005**

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

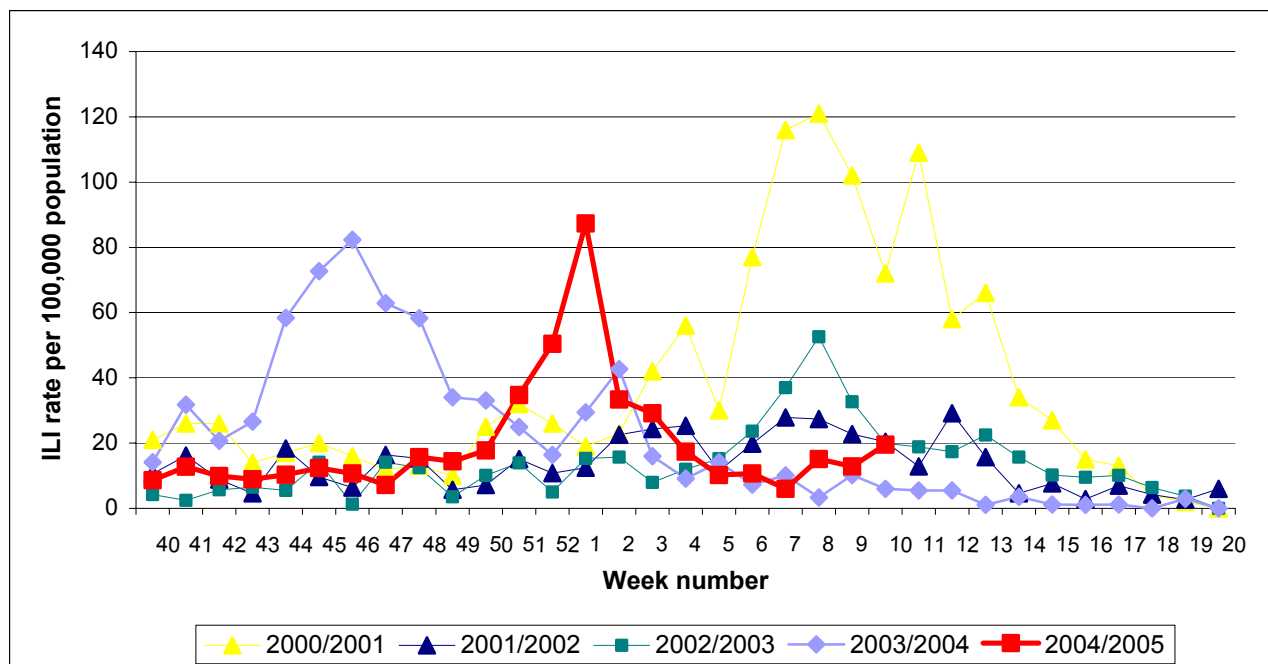
## Summary

Clinical influenza activity increased in Ireland during week ten, with eighteen cases of influenza-like illness (ILI) reported by the sentinel general practices. Virological indicators were slightly lower than in week nine with two influenza A and three influenza B detections. The proportion of influenza B positives has been increasing in Ireland and in other European countries in recent weeks.

## Clinical data

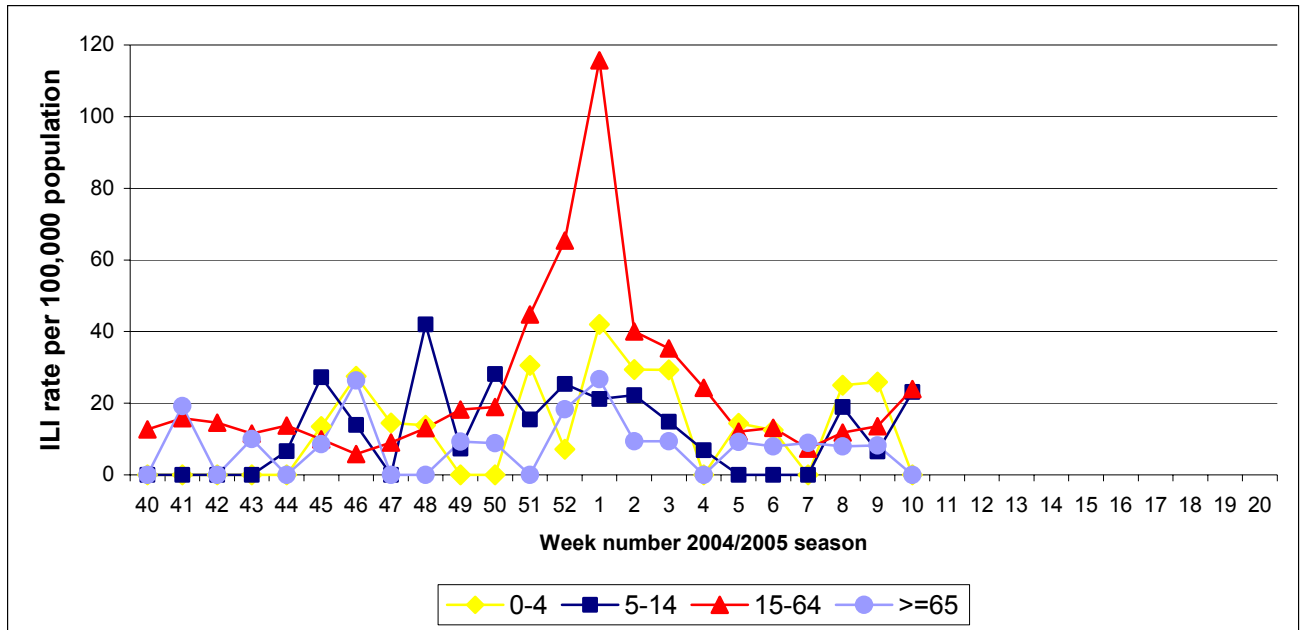
During week ten (week ending 13<sup>th</sup> March 2005), eighteen cases of ILI were reported by sentinel general practices, corresponding to an ILI consultation rate of 19.5 per 100,000 population (figure 1). This is an increase on the updated rate for week nine of 12.9 per 100,000 population.

Three of the ILI cases were in the 5-14 age group and fifteen were aged between 15 and 64 years. Returns were received from 28 out of 36 sentinel GP practices, giving a population coverage of 2.4% (82% of the total possible reporting GP patient population). Twelve 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 12 swabs taken during week ten by sentinel GPs (tables 1&3). Two of these tested positive for influenza A (unsubtyped) and three tested positive for influenza B. The NVRL also tested 27 respiratory non-sentinel specimens, taken in hospitals during week ten, two of which were positive for RSV. (tables 2&4, figure 3).

To date this season, 59 influenza A (unsubtyped), 58 influenza A (H3N2), 36 influenza A (H1N1) and 15 influenza B viruses have been detected by the NVRL (table 3). Twenty-seven of these were in the 0-4 age group, 24 were in the 5-14 age group, 98 were in the 15-64 age group and 17 were aged over 64 years. Of the 344 RSV detections to date, 197 were aged 6 months or less, 85 were aged between 7 and 11 months, 39 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 10 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
10	12	5	41.7	2	0	0	3	0
Total	306	116	37.9	10	57	35	14	6

**Table 2:** Total number non-sentinel\* respiratory specimens and positive results by type and subtype for week 10 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
10	27	0	0.0	0	0	0	0	2
Total	1181	52	4.4	49	1	1	1	338

\*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 10 2005 and the 2004/2005 season to date

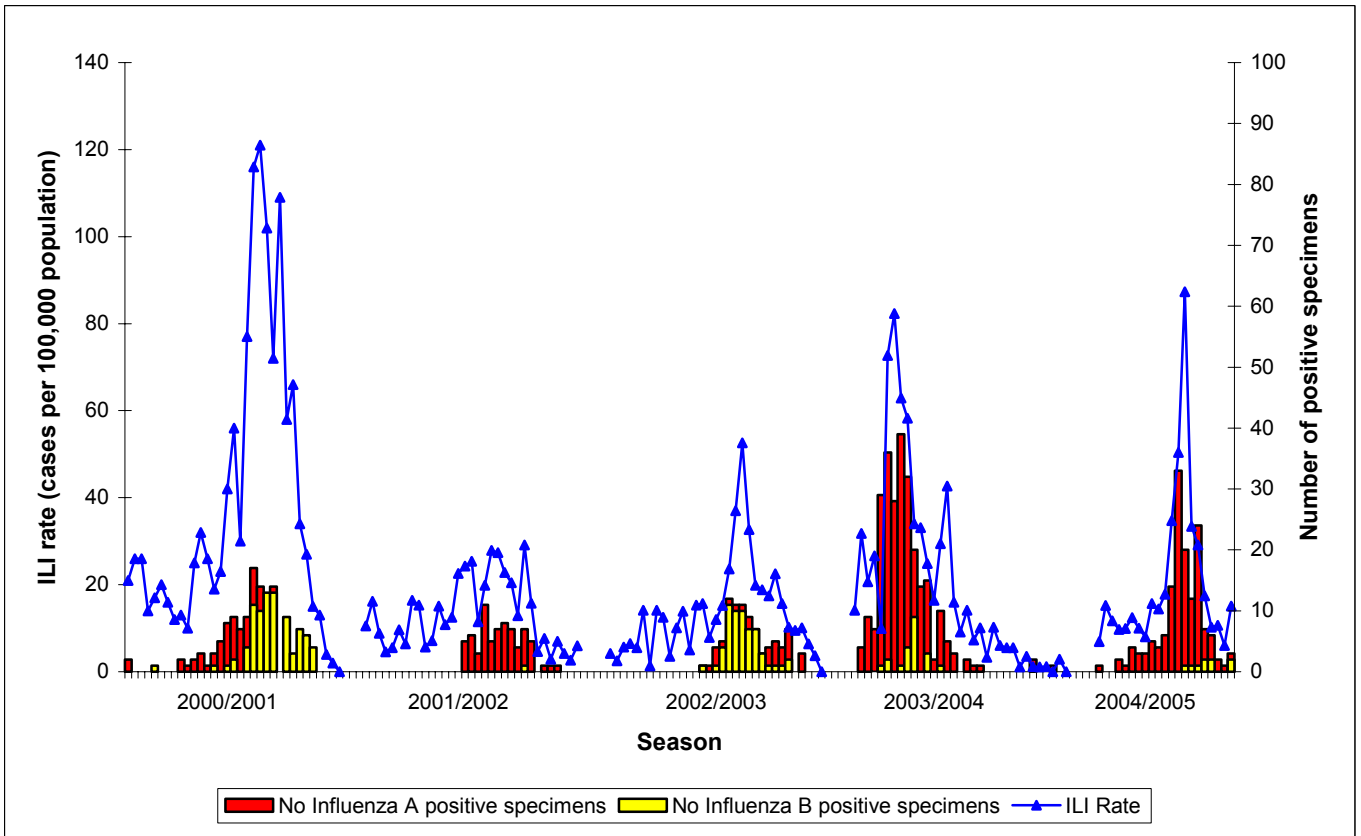
Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A (Unsubtyped)	Influenza A (H3N2)	Influenza A (H1N1)	Influenza B	RSV
10	39	5	12.8	2	0	0	3	2
Total	1487	168	11.3	59	58	36	15	344

\*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.

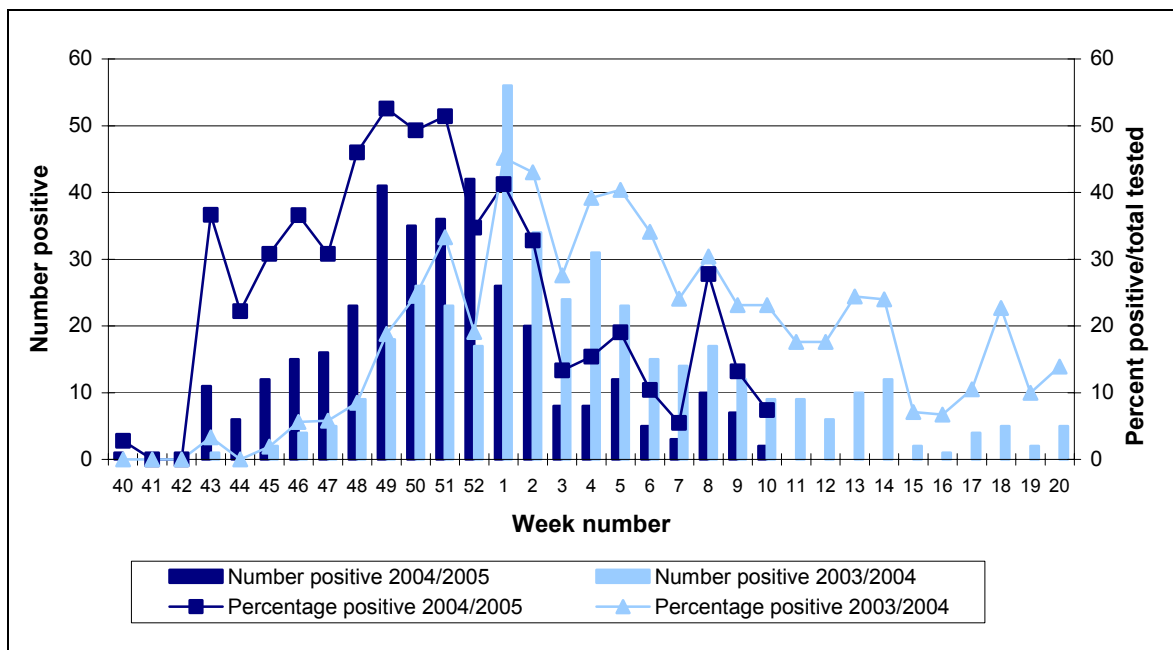
**Table 4:** Total number of sentinel and non-sentinel\* influenza A and B positive specimens by health board for week 10 2005 and the 2004/2005 season to date

	Week 10 2005			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
ERHA	0	1	1	61	5	66
MHB	1	1	2	5	1	6
MWHB	0	0	0	14	1	15
NEHB	0	0	0	9	2	11
NWHB	0	0	0	10	0	10
SEHB	0	0	0	26	2	28
SHB	1	1	2	11	2	13
WHB	0	0	0	17	2	19
<b>Total</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>153</b>	<b>15</b>	<b>168</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

Two 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.

### Outbreak reports

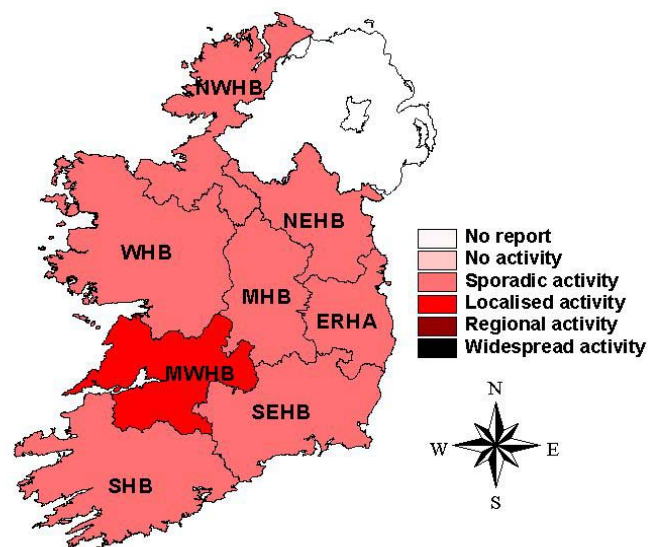
Two influenza outbreaks have been reported this season to date. An outbreak of influenza A (H3N2) in a long-stay care facility for the elderly was reported by the ERHA during week three. Thirty-seven patients and 19 staff members were affected, corresponding to an attack rate of 33.4%. A school outbreak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

### Mortality data

There were no influenza deaths reported to the HPSC during week ten.

### 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 nine, seven health boards reported sporadic activity and one reported localised activity.



**Figure 4:** Map of influenza activity by health board/authority during week 9 2005

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

During week ten, ten cases of clinical influenza and 69 cases of ILI were reported in Northern Ireland. These figures correspond to a combined ILI and clinical influenza rate of 62.1 cases per 100,000 population, which is similar to the updated rate of 65.8 per 100,000 population for week nine. Returns were received from 20 of the 24 sentinel GP practices, giving a population coverage of 7.5%. Influenza A(H3) was detected in five non-sentinel swabs.

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

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

Clinical influenza activity in England declined to well within baseline levels (18 consultations per 100,000) during week ten. Influenza activity remained at similar levels to week nine in Wales (3 consultations per 100,000) and Scotland (36 consultations per 100,000). Respiratory viruses were detected in eight community samples tested by the ERNVL; Seven influenza A (H3) and one influenza B. An influenza outbreak in a nursing home in Central England was reported to the Centre for Infections. To date this season, 63% of viruses characterised by the ERNVL have been influenza A/Wellington/1/2004(H3N2)-like.

<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**

During week ten, clinical influenza activity was high in Germany and Poland, medium in 16 countries and low in seven countries. Widespread outbreaks were reported by ten countries, all of which were located in Central Europe, with the exception of Norway and Denmark. In countries reporting age-specific data, children aged 0-4 and 5-14 were most affected. Influenza activity is increasing in Latvia, Lithuania, Scandinavia, Romania and Slovakia (in the north-east of Europe). In the rest of Europe activity is either decreasing or stabilising and influenza activity appears to have reached its peak in most of Central Europe.

In most countries influenza A, and particularly influenza A (H3) or (H3N2) dominated, but influenza B detections have been increasing in recent weeks and influenza B was the dominant type detected in Ireland, Poland and Spain and co-dominated in Austria, the Czech Republic, Slovenia and Romania.

Five hundred and seven sentinel swabs and 487 non-sentinel swabs tested positive for influenza. Of these, 506 (50.9%) were influenza A (unsubtyped), 53 (5.3%) were influenza A (H1), 3 (0.3%) were influenza A (H1N1), 195 (19.6%) were influenza A (H3), 52 (5.2%) were influenza A (H3N2) and 185 (18.6%) were influenza B.

Two thousand two hundred and fifty-six influenza viruses have been antigenically or genetically characterised in Europe between week 40 2004 and week 10 2005. Of these, 883 (39.1%) were A/Wellington/1/2004 (H3N2)-like, 560 (24.8%) were A/California/7/04 (H3N2)-like, 105 (4.7%) were A/Fujian/411/2002 (H3N2)-like, 434 (19.2%) were A/New Caledonia/20/99 (H1N1)-like, 165 (7.3%) were B/Jiangsu/10/2003-like and 109 (4.8%) were B/Hong Kong/330/2001-like. Since the California reference strain has become available for comparison, many new and re-characterised isolates have been shown to be closely related to it. This strain will be the prototype A(H3N2) component of the 2005/2006 northern hemisphere vaccine.

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 88.7% of detections. Where influenza A viruses have been subtyped, 83.8% were influenza A (H3N2) and 16.2% were influenza A (H1N1). <http://www.eiss.org/>

### **Influenza activity in Canada**

During week nine (week ending 05/03/2005), influenza activity remained high in Canada, with widespread activity reported in Ontario, parts of Alberta and British Columbia. Elsewhere in Canada either localised, sporadic or no activity was reported. Sentinel physicians reported 51 cases of ILI per 1,000 patient visits. The Public Health Agency of Canada received 4825 reports of laboratory tests for influenza during week eight, including 647 (13.4%) influenza A detections and 163 (3.4%) influenza B detections. To date this season, there have been a total of 880 influenza outbreaks, of which 635 occurred in retirement homes, 66 in hospitals and 179 in schools. Since the start of the 2004/2005 influenza season, 677 influenza viruses have been antigenically characterised. Of the 606 influenza A (H3N2) viruses characterised, 486 (80.2%) were influenza A/Fujian/411/02(H3N2)-like and 120 (19.8%) were A/California/7/04(H3N2)-like. Of the 71 influenza B viruses characterised, 64 (90.1%) were influenza B/Shanghai/361/02-like and seven (9.9%) were influenza B/Hong Kong/330/01-like. <http://www.phac-aspc.gc.ca/fluwatch/index.html>

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

Influenza activity in the US decreased during week nine (week ending 05/03/2005). Four percent of patient visits to US sentinel providers were due to ILI. This percentage has been above the national baseline of 2.5% for the past eight weeks. The proportion of deaths attributed to pneumonia and influenza was 8.9%, this is above the epidemic threshold level of 8.2% for week nine. During week nine, 24 states reported widespread influenza activity, 20 states reported regional activity and the remaining states reported local or sporadic activity.

WHO and NREVSS laboratories tested 3,985 specimens for influenza during week nine. Seventy-three (8.7%) of these were positive for influenza A (H3N2), 541 (64.6%) were positive for influenza A (unsubtyped) and influenza B was detected in 224 (26.7%) specimens. Since October 1<sup>st</sup>, 491 influenza viruses have been antigenically characterised by the CDC. One hundred and thirty-seven (44%) influenza A (H3N2) viruses were characterised as antigenically similar to the A/Wyoming/3/2003 and 171 (56%) were more closely related to a newer reference strain, A/California/7/2004 (H3N2). One hundred and twenty-eight (71.5%) influenza B viruses were characterised as B/Shanghai/361/02-like and seven (3.9%) showed a reduced reaction to B/Shanghai/361/02 ferret antisera. The remaining 44 (24.6%) influenza B viruses were characterised as belonging to the B/Victoria lineage. All four 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 ten, widespread influenza outbreaks were reported by the Ukraine (7 influenza B viruses detected) and regional outbreaks were reported by Greece and Tunisia.

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



## **Avian influenza**

On March 11<sup>th</sup>, the WHO issued a statement confirming an additional ten cases of, and three deaths from, human infection with H5N1 avian influenza in Viet Nam. The official number of laboratory-confirmed human cases of avian influenza A (H5N1) in Thailand, Viet Nam and Cambodia since the January 2004 is now 69. Forty-six (66.7%) of these cases were fatal.

Since the current human outbreak began in Viet Nam in December 2004, at least eight people from the northern province of Thai Binh have tested positive for influenza A (H5N1). Two of these cases have died. These cases include three family clusters. One of these comprises a 21 year-old man, his 14 year-old sister and their 80 year-old grandfather. The grandfather was asymptomatic and it is not known if he contracted the virus directly from his grandchildren or through drinking raw duck blood during the lunar New Year festivities. A 26 year-old nurse who cared for the 21-year old man has also tested positive for the virus, but he may have acquired it from poultry. In a second family cluster, the 61 year-old widow of a man who died from H5N1 avian influenza in February also tested positive for the virus despite being asymptomatic. Mild and asymptomatic cases of H5N1 infection were reported in the Hong Kong outbreak in 1997 and in a Japanese man in 2003. This raises the possibility that human H5N1 infections may be more common than previously thought and that the case fatality rate is lower than currently calculated.

Although the avian influenza 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/>