Weekly Influenza Surveillance Report

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Week 5 2005

Week starting Monday 31st January 2005 &
ending Sunday 6th February 2005

Report produced: 10/02/2005

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

Summary
During week five 2004, influenza activity decreased in Ireland, with eight cases of influenza-like illness (ILI) reported by the sentinel GPs. Of the seven swabs submitted to the NVRL for testing, three were positive for influenza A and two were positive for influenza B. To date this season, 7 influenza B, 31 influenza A (H1N1), 22 influenza A (H3N2) and 87 influenza A (unsubtyped) viruses have been detected.

Clinical data
During week five (week ending 6th February 2005), eight cases of ILI were reported by sentinel general practices, corresponding to an ILI consultation rate of 8.7 per 100,000 population (figure 1). This is a decrease from the updated week rate for week four of 17.4 per 100,000.

One of the ILI cases was in the 5-14 years age group, six were in the 15-64 years age group and one was aged over 65 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). Eight practices reported ILI.

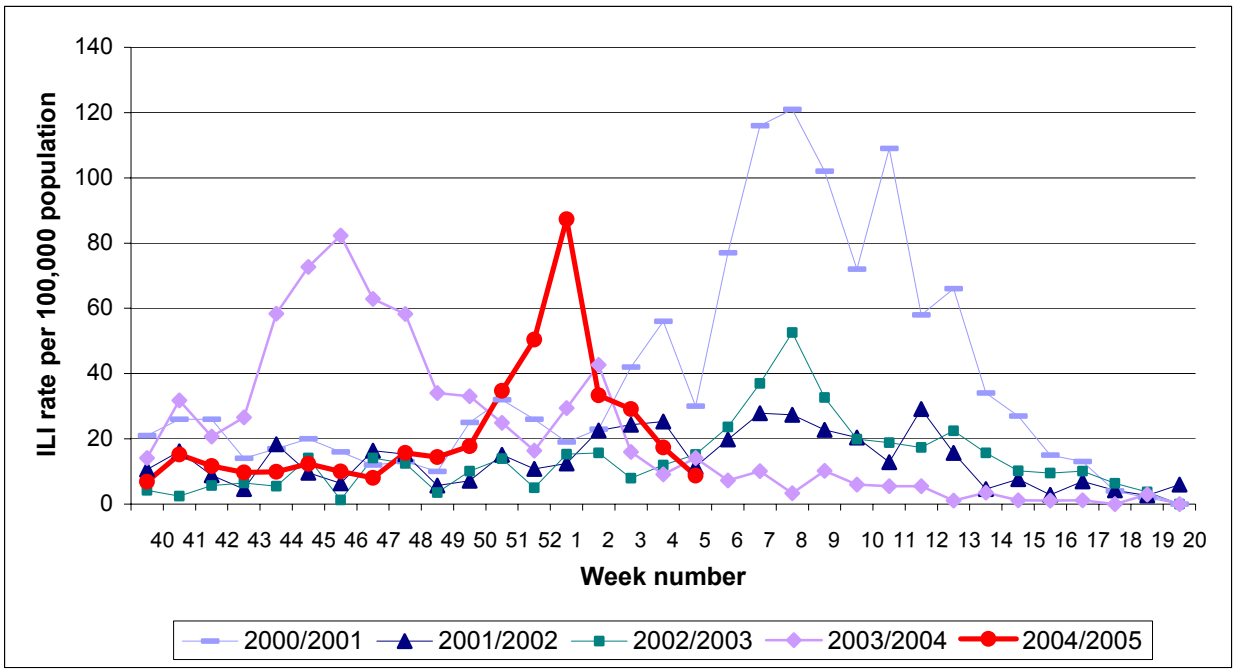

Figure 1. GP consultation rate for ILI per 100,000 population by week, during the 2000/2001, 2001/2002, 2002/2003, 2003/2004 & 2004/2005**-influenza seasons.

***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*

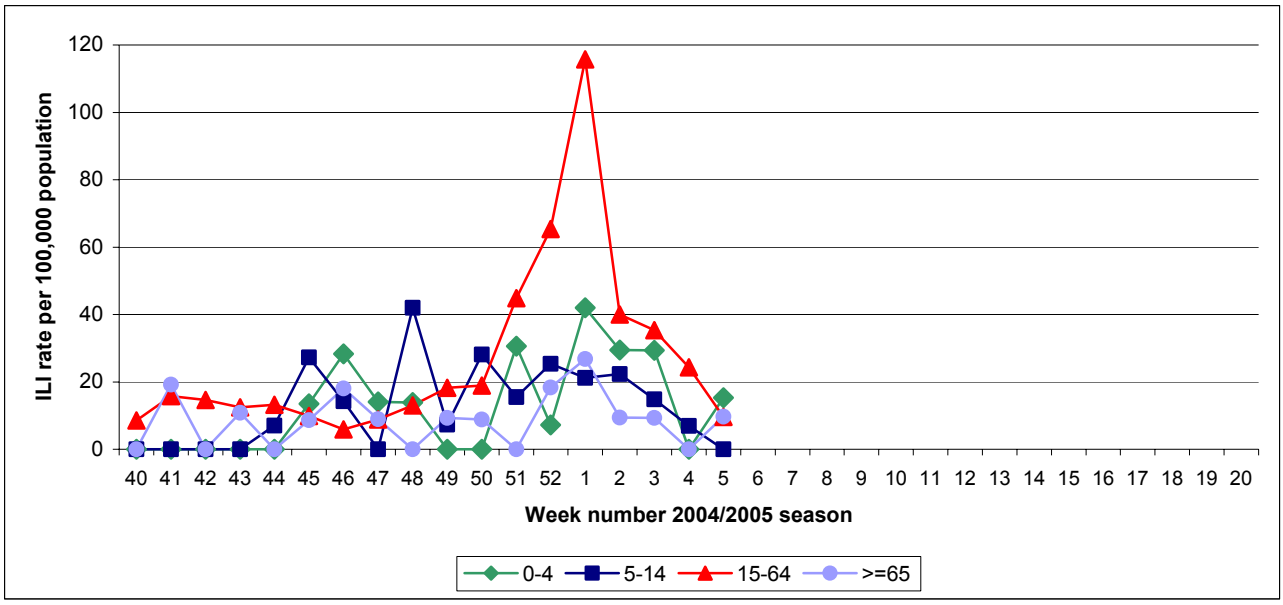

Figure 2. Age specific GP consultation rate* for ILI per 100,000 population by week** for the 2004/2005-influenza season

** 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 seven swabs taken during week five by sentinel GPs (tables 1&3). Three of these tested positive for influenza A (unsubtyped) and two tested positive for influenza B. The NVRL also tested 63 respiratory non-sentinel specimens, taken in hospitals, during week five. One sample tested positive for influenza A and twelve tested positive for RSV (tables 2&4, figure 3).

During week five, the percentage of RSV positive specimens increased slightly to 19% from 15.4% in week four. During weeks 43-53, the percentages of RSV positive specimens were noticeably higher than the percentages during the same period in the 2003/2004 season (figure 3).

To date this season, 7 influenza B, 31 influenza A (H1N1), 22 influenza A (H3N2) and 87 influenza A (unsubtyped) viruses have been detected (table 3). Twenty-five of these were in the 0-4 years age group, 17 were in the 5-14 years age group, 87 were in the 15-64 years age group and 16 were aged over 64 years. Of the 316 RSV detections to date, 178 were aged 6 months or less, 81 were aged between 7 and 11 months, 36 were aged between 1 and 4 years, and 15 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 5 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
5	7	5	71.4	3	0	0	2	0
Total	257	101	39.7	43	21	30	7	5

Table 2: Total number non-sentinel* respiratory specimens and positive results by type and subtype for week 5 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
5	63	1	1.6	1	0	0	0	12
Total	962	46	4.7	44	1	1	0	311

Table 3: Total number of sentinel and non-sentinel* respiratory specimens and positive results for week 5 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
5	70	6	8.6	4	0	0	2	12
Total	1219	147	12.1	87	22	31	7	316

*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 5 2005 and the 2004/2005 season to date

	Week 5 2005			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
ERHA	4	2	6	54	2	**56**
MHB	0	0	0	3	0	**3**
MWHB	0	0	0	14	1	**15**
NEHB	0	0	0	9	0	**9**
NWHB	0	0	0	8	0	**8**
SEHB	0	0	0	25	2	**27**
SHB	0	0	0	10	1	**11**
WHB	0	0	0	17	1	**18**
Total	**4**	**2**	**6**	**140**	**7**	**147**

* 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.

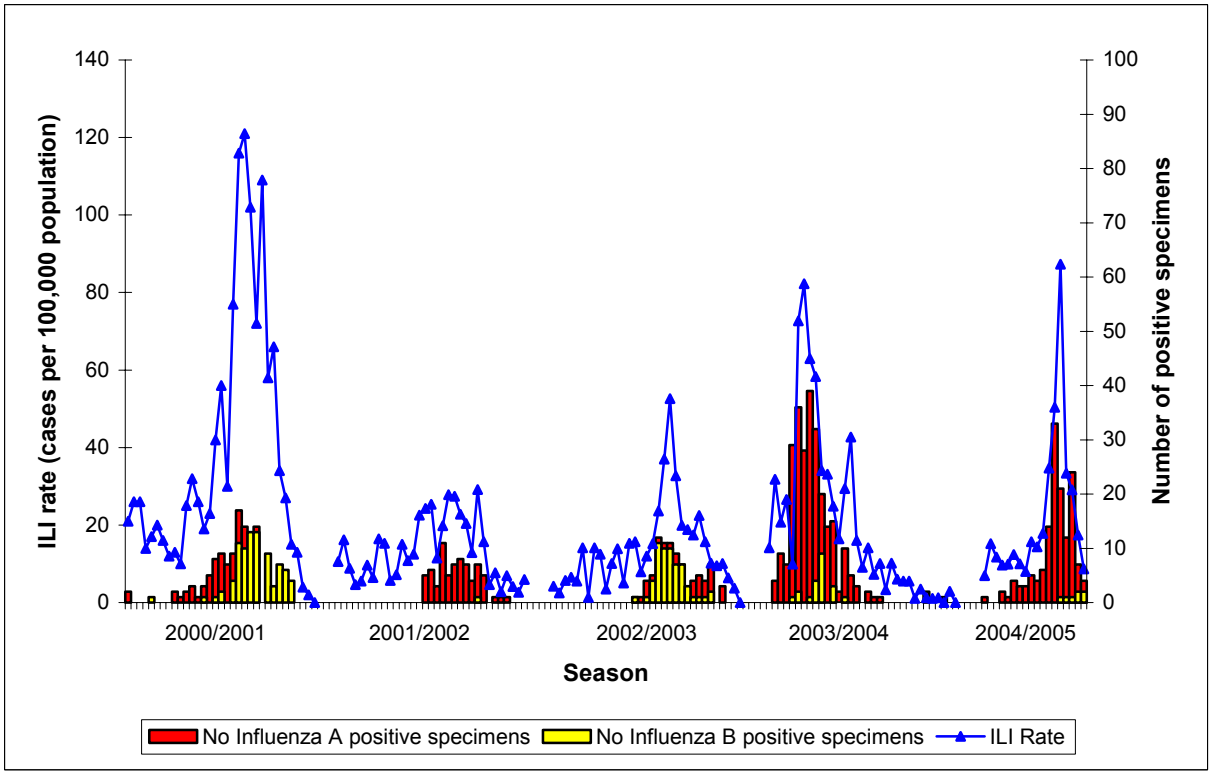

Figure 3. ILI rate and number of positive specimens detected during the 2000/2001, 2001/2002, 2002/2003, 2003/2004 and 2004/2005 seasons.

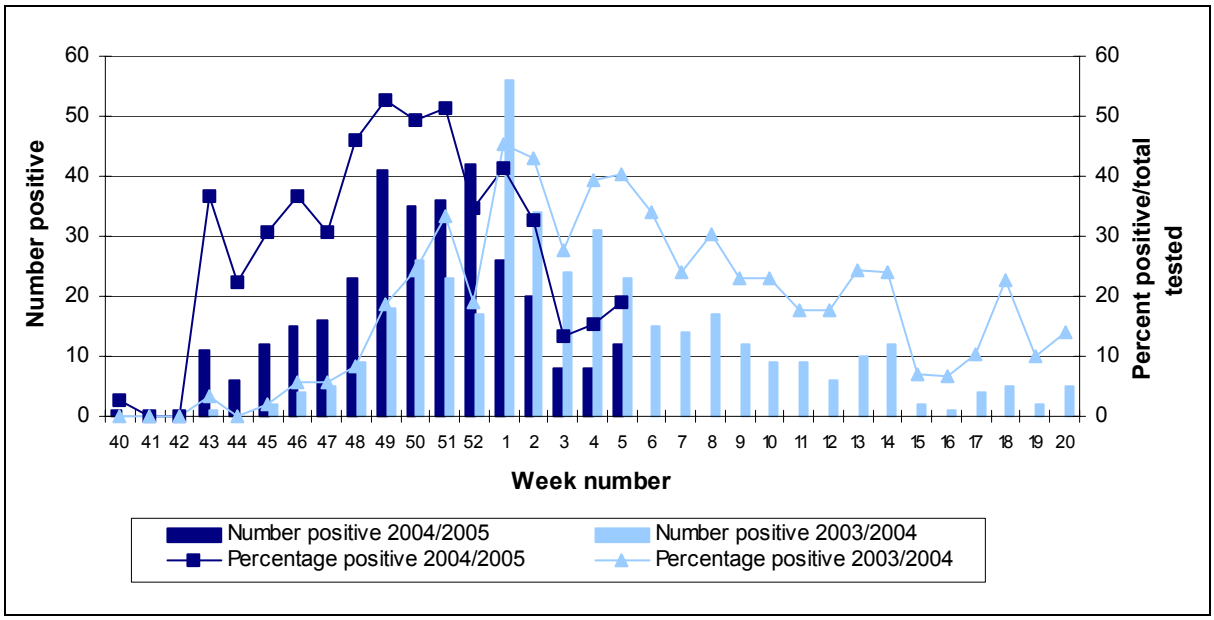

Figure 4. Number and percentage of non-sentinel RSV positive specimens detected during the 2004/2005** and 2003/2004 influenza seasons.

**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. The current vaccine will provide protection against these strains.

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, this corresponds to an attack rate of 33.4%. Control measures have been implemented and no new cases have been reported since January 25th. 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 during week five.

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 four, six health boards reported sporadic activity and two reported no activity.

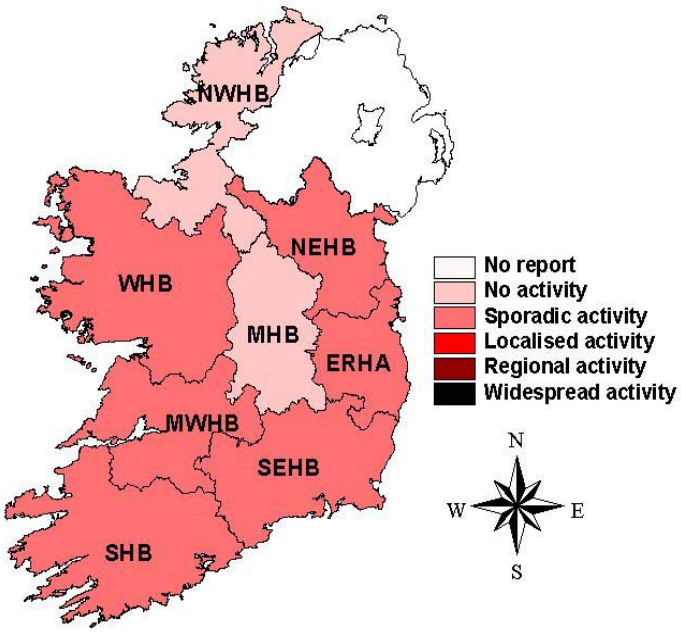

Figure 4: Map of influenza activity by health board/authority during week 4 2004/5

Influenza activity in Northern Ireland
Influenza activity levels increased in Northern Ireland during week five, but remained low. Two cases of clinical influenza and 77 cases of ILI were reported. These figures correspond to a combined ILI and clinical influenza rate of 61.5 cases per 100,000 population, which is higher than the updated rate of 44.4 per 100,000 population, from week four. Returns were received from 21 of the 24 sentinel GP practices, giving a population coverage of 7.4%. During week five, one sentinel and one non-sentinel swab tested positive for influenza A (H3) and one non-sentinel swab tested positive for influenza A (unsubtyped). RSV was detected in 12 non-sentinel specimens.
http://www.cdscni.org.uk//

Influenza activity in England, Scotland and Wales
Influenza activity levels in England remain above baseline and increased slightly (to 34 consultations per 100,000) during week five. Scotland (22 per 100,000 population) and Wales (5 per 100,000 population) reported a decrease in ILI consultation rates and ILI levels were below baseline during week five. Influenza viruses were detected in 35 community samples and 1 hospital sample in the UK; 30 of these were influenza A (H3), 4 were influenza A (H1) and 2 were influenza B. RSV was detected in one community sample. During week five, ten outbreaks of ILI were reported from Wales and central and southern England. Specimens from two of the outbreaks tested positive for influenza A (H3) and specimens from a third tested positive for influenza A.

One hundred and forty-three influenza viruses have been characterised this season to date in England. Seventy-four were influenza A/Wellington//1/2004(H3N2)-like, 54 were influenza A/New Caledonia/20/99 (H1N1)-like, 13 were influenza B/Shanghai/361/02-like and 2 were influenza B/Hong Kong/330/-01-like.
http://www.show.scot.nhs.uk/scieh/infectious/respiratory/influenzasurveillance/influenzasurveillance.htm
http://www.hpa.org.uk/infections/topics_az/influenza/flu.htm

Influenza activity in Europe
During week five, influenza activity increased across most of Europe. Ireland, Scotland and Spain were the only countries to report decreasing influenza intensities. Widespread outbreaks were reported by Belgium, France, Italy, Luxembourg, Netherlands, Portugal, Slovenia, Spain and Switzerland.

Five hundred and sixty-eight (22.9%) sentinel swabs and 490 (15.3%) non-sentinel swabs tested positive for influenza. Of these, 688 were influenza A (unsubtyped), 23 were influenza A (H1), 14 were influenza A (H1N1), 129 were influenza A (H3), 123 were influenza A (H3N2) and 81 were influenza B.

Four hundred and thirty-nine influenza viruses have been antigenically and/or genetically characterised in Europe since week 40 2004. Of these, 263 were A/Wellington/1/2004 (H3N2)-like, 97 were A/New Caledonia/20/99 (H1N1)-like, 15 were A/Fujian/411/2002 (H3N2)-like, 2 were A/Panama/2007/99 (H3N2)-like, 38 were B/Jiangsu/10/2003-like and 24 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 92.3% of detections. http://www.eiss.org/

Influenza activity in Canada
During week four (week ending 29/1/2005), influenza activity remained high in Canada, with widespread influenza activity reported in British Columbia, Alberta, Saskatchewan and Ontario. Elsewhere in Canada either localised, sporadic or no activity was reported. During week four, sentinel physicians reported 34 cases of ILI per 1,000 patient visits. Influenza A was detected in 879 of the 4286 specimens sent for laboratory confirmation. Influenza B was detected in 16. Since the start of the 2004/2005 influenza season, 334 influenza viruses have been antigenically characterised. Three hundred and twelve (93.4%) were influenza A/Fujian/411/02(H3N2)-like, twenty-one were influenza B/Shanghai/361/02-like (6.3%) and one (0.3%) was influenza B/Hong Kong/330/01-like. To date this season, there have been a total of 360 influenza outbreaks, of which 294 occurred in retirement homes, 25 in hospitals and 41 in schools. http://www.phac-aspc.gc.ca/fluwatch/index.html

Influenza activity in the United States
Influenza activity in the US continued to increase during week four (week ending 29/01/2005). Almost four percent (3.7%) of patient visits to US sentinel providers were due to ILI. This is above the national baseline of 2.5%. During week four, 8.0% of all deaths, reported by the vital statistics offices of 122 cities, were attributed to pneumonia or influenza. This percentage is below the epidemic threshold level of 8.1% for week four. During week four, 16 states reported widespread influenza activity, 19 states and New York City reported regional activity and the remaining states reported either local or sporadic activity.

WHO and NREVSS laboratories tested 2,986 specimens for influenza during week four. Ninety-two of these were positive for influenza A (H3N2), 297 were positive for influenza A (unsubtyped) and influenza B was detected in six specimens. Since October 1st, 239 influenza viruses have been antigenically characterised by the CDC. One hundred and twenty-five influenza A (H3N2) viruses were characterised as antigenically similar to the A/Wyoming/3/2003 and thirty-two were more closely related to a newer reference strain, A/California/7/2004 (H3N2). Sixty-four influenza B viruses were characterised as B/Shanghai/361/02-like and the remaining 16 influenza B viruses were characterised as belonging to the B/Victoria lineage.
http://www.cdc.gov/flu/weekly/

Influenza activity Worldwide
During week five, sporadic influenza activity was reported in China (6 A(H1), 17 A(H3) and 10 B). Finland reported a local outbreak and 13 influenza A (H3) viruses were detected. Japan did not report influenza activity levels, but 27 influenza A (H3) and 58 influenza B viruses were detected during week five.
http://rhone.b3e.jussieu.fr/flunet/www/

Avian influenza
The first human case of avian influenza in Cambodia was reported on the February 2nd. The 25 year-old woman developed symptoms on January 21st, was hospitalised in neighbouring Viet Nam on January 27th and died three days later. Tests undertaken on February 1st were positive for influenza A(H5). Her 14 year-old brother died after experiencing respiratory symptoms and it is suspected that he was also infected with avian influenza. Officials from the Ministry of Health of Cambodia and the World Health Organisation (WHO) have stepped up surveillance in Kampot province in Cambodia in response to these deaths and are implementing campaigns to increase awareness of avian influenza in the region.

The total number of laboratory-confirmed cases in Thailand, Viet Nam and Cambodia since the beginning of 2004 is now 55. Forty-two (76.4%) of these were fatal. Although the avian influenza virus is highly pathogenic in humans, there is 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/

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[a]
- a B/Shanghai/361/2002-like virus[b]

[a] *The currently used vaccine virus is A/Wyoming/3/2003. A /Kumamoto/102/2002 is also available as a vaccine virus.*
[b] *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 10th 2005. The members of the WHO Collaborating Centres on Influenza recommended that the vaccines contain the following strains:

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

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

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/