# Weekly Influenza Surveillance Report





## Week 12 2005

**Week starting Monday 21st March 2005 &**
**ending Sunday 27th March 2005**

**Report produced: 01/04/2005**

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

**Summary**
Clinical influenza activity decreased in Ireland during week twelve, with ten cases of influenza-like illness (ILI) reported by the sentinel general practices. Virological indicators were similar to week eleven, with four influenza B detections.

**Clinical data**
During week twelve (week ending 27th March 2005), ten cases of ILI were reported by sentinel general practices, corresponding to an ILI consultation rate of 11.8 per 100,000 population (figure 1). This is a decrease from the updated rate for week eleven of 19.1 per 100,000 population.

Three of the ILI cases were in the 5-14 age group and seven were aged between 15 and 64 years. Returns were received from 26 out of 36 sentinel general practices, giving a population coverage of 2.2% (75% of the total possible reporting GP patient population). Eight practices reported ILI. Seven of the ten cases were reported by sentinel general practices in the HSE-ER.

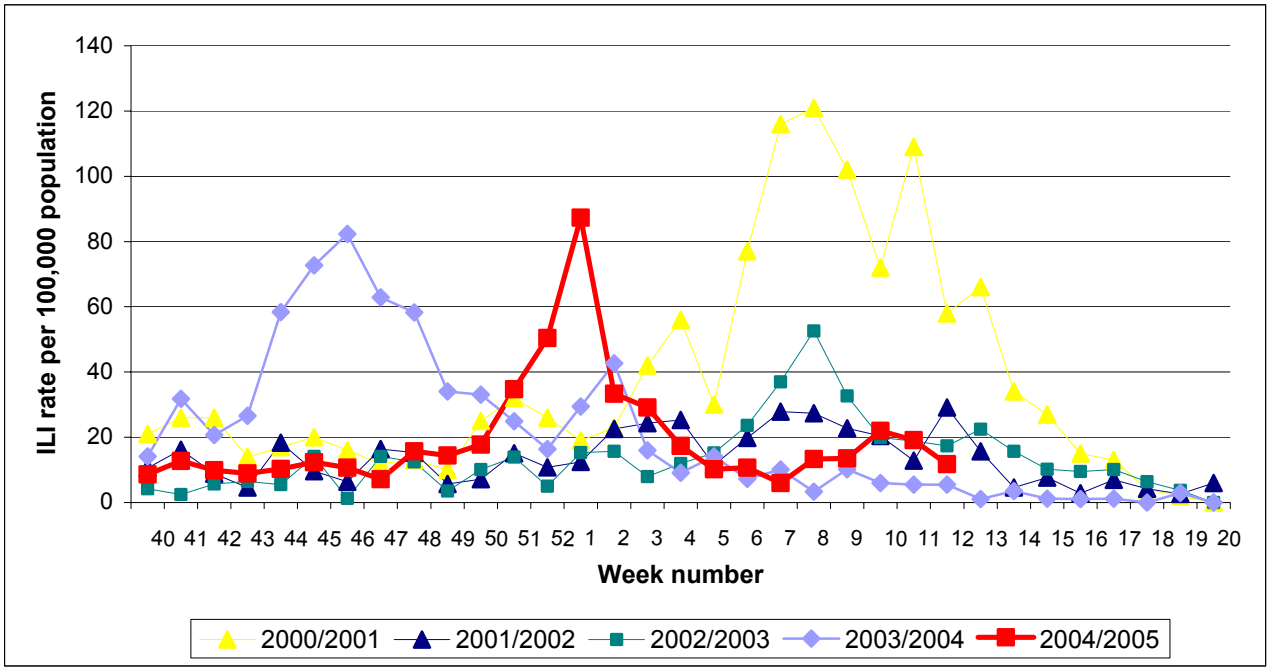


**Figure 1.** GP consultation rate for ILI per 100,000 population by week, during the 2000/2001, 2001/2002, 2002/2003, 2003/2004 & 2004/2005**-influenza seasons.

***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*

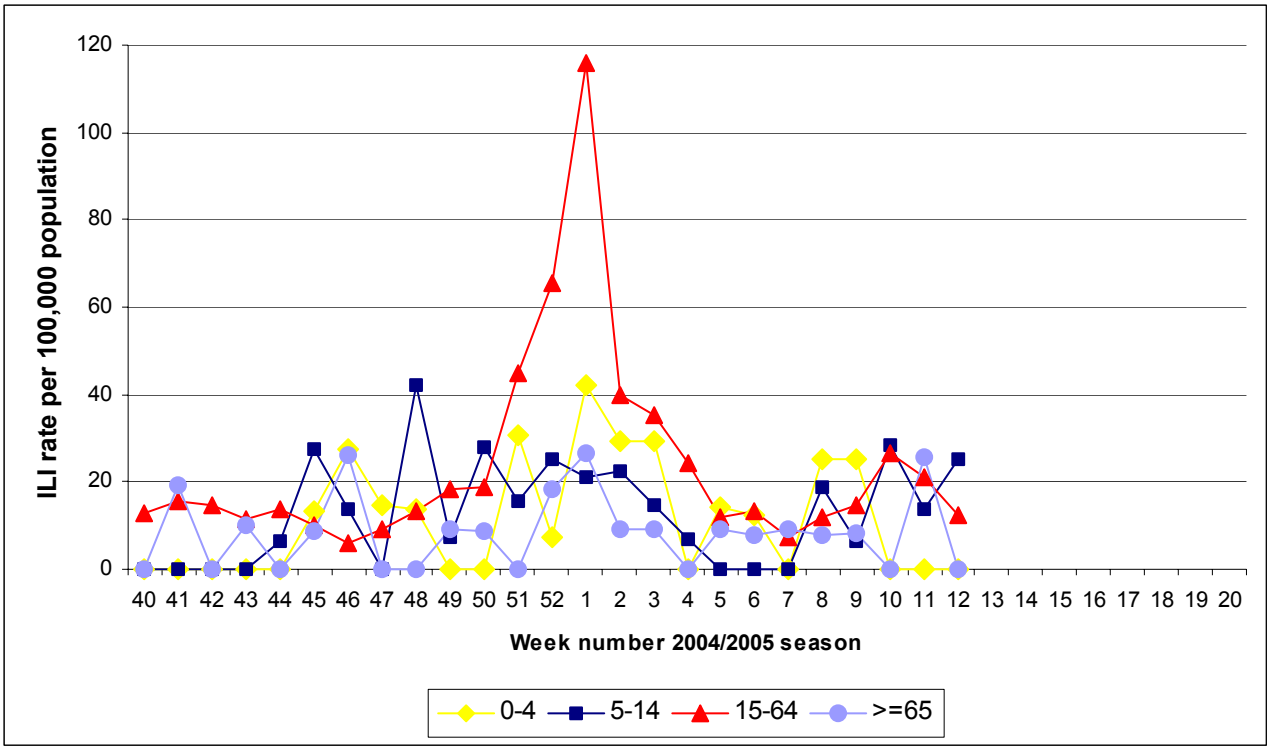


**Figure 2.** Age specific GP consultation rate* for ILI per 100,000 population by week** for the 2004/2005-influenza season

** 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 eight swabs taken during week twelve by sentinel GPs (tables 1&3). Four tested positive for influenza B. The NVRL also tested 32 respiratory non-sentinel specimens, taken in hospitals during week twelve, four of which were positive for RSV (tables 2&4, figure 3).

To date this season, 60 influenza A (unsubtyped), 58 influenza A (H3N2), 36 influenza A (H1N1) and 25 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, 109 were in the 15-64 age group and 17 were aged over 64 years. Of the 349 RSV detections to date, 200 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 12 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 |
|---|---|---|---|---|---|---|---|---|
| 12 | 8 | 4 | 50.0 | 0 | 0 | 0 | 4 | 0 |
| Total | 326 | 127 | 39.0 | 11 | 57 | 35 | 24 | 6 |

**Table 2:** Total number non-sentinel* respiratory specimens and positive results by type and subtype for week 12 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 |
|---|---|---|---|---|---|---|---|---|
| 12 | 32 | 0 | 0.0 | 0 | 0 | 0 | 0 | 4 |
| Total | 1247 | 52 | 4.2 | 49 | 1 | 1 | 1 | 343 |

*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 12 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 |
|---|---|---|---|---|---|---|---|---|
| 12 | 40 | 4 | 10.0 | 0 | 0 | 0 | 4 | 4 |
| Total | 1573 | 179 | 11.4 | 60 | 58 | 36 | 25 | 349 |

*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 12 2005 and the 2004/2005 season to date

| | Week 12 2005 | | | Season to date | | |
|---|---|---|---|---|---|---|
| | Flu A | Flu B | Total | Flu A | Flu B | Total |
| ERHA | 0 | 3 | 3 | 61 | 10 | **71** |
| MHB | 0 | 0 | 0 | 6 | 1 | **7** |
| MWHB | 0 | 0 | 0 | 14 | 1 | **15** |
| NEHB | 0 | 0 | 0 | 9 | 3 | **12** |
| NWHB | 0 | 0 | 0 | 10 | 1 | **11** |
| SEHB | 0 | 1 | 1 | 26 | 4 | **30** |
| SHB | 0 | 0 | 0 | 11 | 2 | **13** |
| WHB | 0 | 0 | 0 | 17 | 3 | **20** |
| **Total** | **0** | **4** | **4** | **154** | **25** | **179** |

* 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.

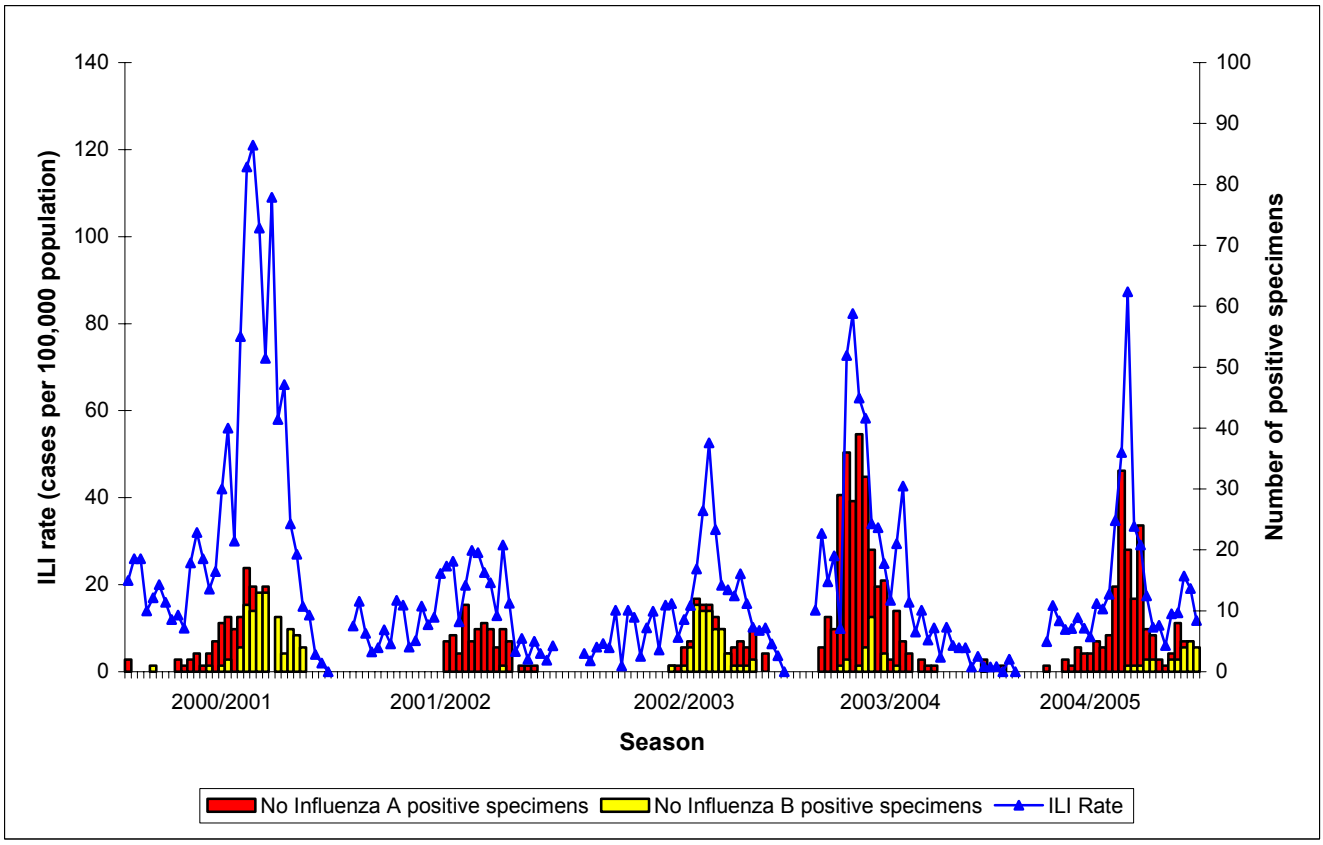


**Figure 3.** ILI rate and number of positive specimens detected during the 2000/2001, 2001/2002, 2002/2003, 2003/2004 and 2004/2005 seasons.

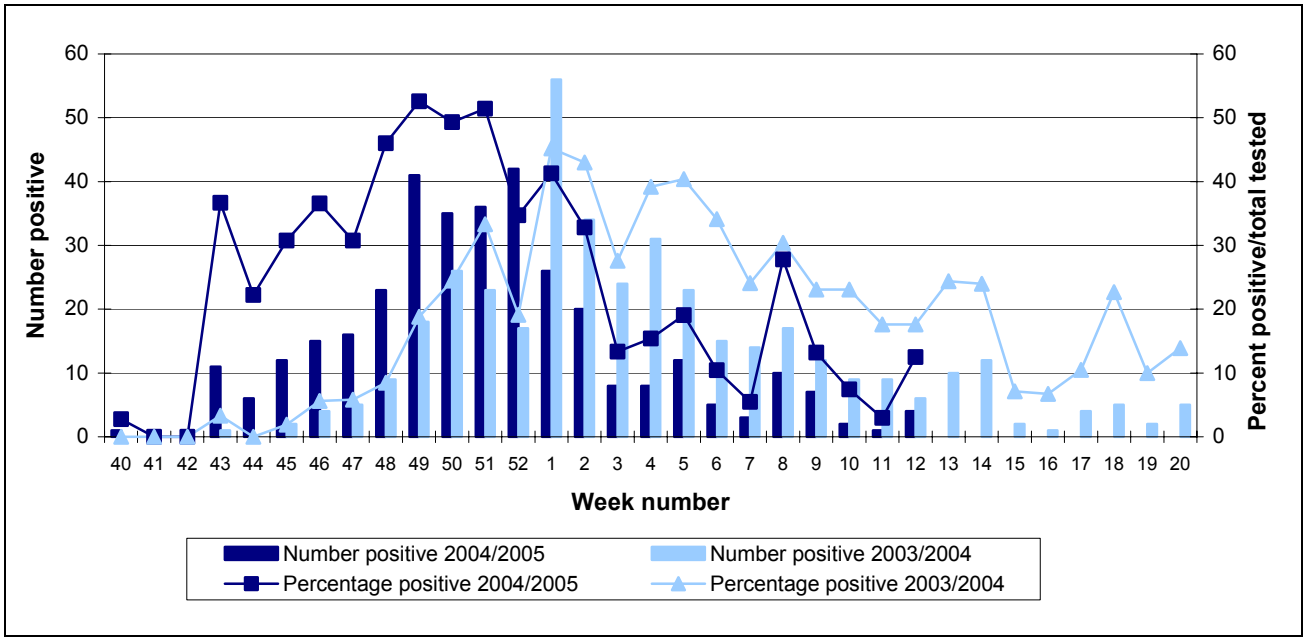


**Figure 4.** Number and percentage of non-sentinel RSV positive specimens detected during the 2004/2005** and 2003/2004 influenza seasons.

**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**
No influenza deaths were reported to the HPSC during week twelve.

**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 eleven, two health boards reported localised activity, four reported sporadic activity and two reported no activity.

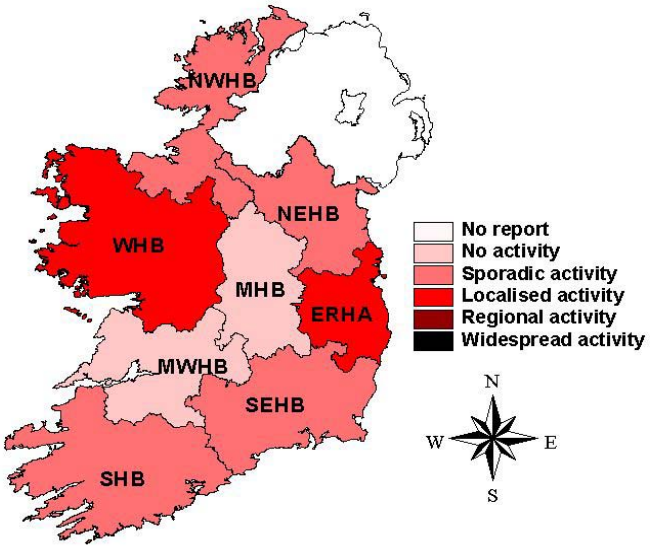


**Figure 4:** Map of influenza activity by health board/authority during week 11 2005

**Influenza activity in Northern Ireland**
Reporting levels in Northern Ireland were low due to the Easter holidays and no bulletin was produced for week 12.
http://www.cdscni.org.uk//

**Influenza activity in England, Scotland and Wales**
A decrease in influenza activity was reported in England, Scotland and Wales during week 12, with GP consultation rates for influenza-like-illness in England decreasing from 27 consultations per 100,000 reported in week 11 to 16 per 100,000. This decrease may be partially due to data from routine sources being delayed over the holiday period. During week 12, five detections of influenza were made from samples sent from community sources; four influenza A (H3) detections and one influenza B.
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 twelve, decreasing or baseline clinical influenza activity was seen across Europe. Clinical influenza activity was high in Denmark, Lithuania and Latvia, medium in eight countries and low in 12 countries. Widespread outbreaks were reported by Denmark, France, the Netherlands and Sweden. Five countries reported regional activity and the remaining countries reported local (n=4), sporadic (n=7) or no activity (n=2).

In most countries influenza A, and particularly influenza A (H3) or (H3N2) dominated, but the proportion of influenza B detections has increased in recent weeks and influenza B was the dominant type detected in the Netherlands, Ireland and Spain, and represented 25% of all detections in week twelve.

Two hundred and one sentinel swabs and 328 non-sentinel swabs tested positive for influenza. Of these, 292 (55.2%) were influenza A (unsubtyped), 33 (6.2%) were influenza A (H1), 1 (0.2%) were influenza A (H1N1), 65 (12.3%) were influenza A (H3), 7 (1.3%) were influenza A (H3N2) and 131 (24.8%) were influenza B.

Two thousand eight hundred and sixty-four influenza viruses have been antigenically or genetically characterised in Europe between week 40 2004 and week 12 2005. Of these, 1218 (42.5%) were A/Wellington/1/2004 (H3N2)-like, 521 (18.2%) were A/California/7/04 (H3N2)-like, 112 (3.9%) were A/Fujian/411/2002 (H3N2)-like, two (0.1%) were A/Panama/2007/99 (H3N2)-like, 577 (20.1%) were A/New Caledonia/20/99 (H1N1)-like, 237 (8.3%) were B/Jiangsu/10/2003-like and 197 (6.9%) 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 86.6% of detections. Where influenza A viruses have been subtyped, 82.3% were influenza A (H3N2) and 17.3% were influenza A (H1N1). http://www.eiss.org/

**Influenza activity in Canada**
During week eleven (week ending 19/03/2005), Ontario and one region of Alberta continued to report widespread influenza activity. Elsewhere, localised, sporadic or no activity was reported. Sentinel physicians reported 26 cases of ILI per 1,000 patient visits. The Public Health Agency of Canada received 3433 reports of laboratory tests for influenza during week

eleven, including 327 (9.5%) influenza A detections and 197 (5.7%) influenza B detections. The proportion of influenza B detections has been increasing in recent weeks in Canada. To date this season, there have been a total of 991 influenza outbreaks, of which 734 occurred in retirement homes, 75 in hospitals and 182 in schools. Since the start of the 2004/2005 influenza season, 775 influenza viruses have been antigenically characterised. Of the 688 influenza A (H3N2) viruses characterised, 503 (73%) were influenza A/Fujian/411/02(H3N2)-like and 185 (27%) were A/California/7/04(H3N2)-like. Of the 87 influenza B viruses characterised, 73 (83.9%) were influenza B/Shanghai/361/02-like and fourteen (16.1%) 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 continued to decline during week eleven (week ending 19/03/2005). Three percent (3.0%) 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 ten weeks, but has declined in recent weeks. The proportion of deaths attributed to pneumonia and influenza was 8.1%, this is equal to the national epidemic threshold level of 8.1% for week eleven. During week eleven, nine states reported widespread influenza activity, 20 states reported regional activity and the remaining states reported local or sporadic activity.

WHO and NREVSS laboratories tested 3,763 specimens for influenza during week eleven. Thirty-three of these were positive for influenza A (H3N2), 359 were positive for influenza A (unsubtyped), 246 were positive for influenza B and one specimen was positive for influenza A (H1N1). Since October 1st, 618 influenza viruses have been antigenically characterised by the CDC. One hundred and fifty (38%) influenza A (H3N2) viruses were characterised as antigenically similar to the A/Wyoming/3/2003 and 249 (62%) were more closely related to A/California/7/2004 (H3N2). One hundred and thirty-nine (65.3%) of the influenza B viruses isolated were characterised as B/Shanghai/361/2002-like and 2 (11.3%) showed a reduced reaction to B/Shanghai/361/02 ferret antisera. The remaining 50 (23.5%) 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 twelve, widespread influenza outbreaks were reported by the Ukraine (A(H1), A(H3) and B) and Belarus (A(H3) and B).
http://rhone.b3e.jussieu.fr/flunet/www/

**Avian influenza**
The Ministry of Health in Viet Nam confirmed three additional cases of human infection with H5N1 avian influenza on the 29th of March. The cases comprise a five year-old boy from the central province of Quang Binh, a 17 year-old girl from the northern province of Nam Dinh and a 40 year-old woman from the northern province of Quang Ninh. The 17 year-old girl died on the 23rd of March. Initial testing has also indicated that all five members of a family of chicken farmers near Haiphong in Viet Nam have H5N1 avian influenza. These cases, which comprise parents and their three young daughters, are being investigated.

On the 29th of March, the Ministry of Health in Cambodia confirmed a second human case of avian influenza. The 28 year-old man from Kampot province developed symptoms on the 17th

of March, was hospitalised and died 5 days later. The secretary of state at the ministry of agriculture said that over 600 chickens had died in half a dozen villages in Kampot province in recent weeks and that a further 120 were culled. Samples taken from the dead chickens tested positive for avian influenza. The results of an investigation indicate that the dead man had contact with poultry.

The official number of laboratory-confirmed human cases of avian influenza A (H5N1) in Thailand (n=17), Viet Nam (n=55) and Cambodia (n=2) since January 2004 is now 74. Forty-nine (66.2%) of these cases were fatal. This total excludes the family cluster in Viet Nam.

On the 27th of March, state media in the Democratic People's republic of Korea officially reported the country's first outbreak of avian influenza in poultry. Mass culls of chickens on affected commercial farms in Pyongyang has been undertaken in an effort to prevent further spread. No human cases have been reported to date.

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/
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[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 influenza 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/