

Influenza Weekly Surveillance Report



A REPORT BY THE HEALTH PROTECTION SURVEILLANCE CENTRE IN COLLABORATION WITH THE IRISH COLLEGE OF GENERAL PRACTITIONERS, THE NATIONAL VIRUS REFERENCE LABORATORY & THE DEPARTMENTS OF PUBLIC HEALTH.

Week 49 2005 (5th to 11th Dec 2005)

Summary

During week 49 2005, influenza-like illness (ILI) decreased slightly, but remained at low levels in Ireland, with 13 ILI cases reported by sentinel GPs. To date this season, no positive influenza specimens have been detected by the NVRL. In recent weeks, increases in respiratory syncytial virus detections have been reported in Ireland and several other European countries.

Background

This is the sixth season of influenza surveillance using computerised sentinel general practices in Ireland. The Health Protection Surveillance Centre (HPSC) is working in collaboration with the Irish College of General Practitioners (ICGP), the National Virus Reference Laboratory (NVRL) and the Departments of Public Health on this sentinel surveillance project. Thirty-nine sentinel general practices have been recruited to report on the number of patients with ILI on a weekly basis.

ILI is defined as the sudden onset of symptoms with a temperature of 38⁰C or more, with two or more of the following: headache, sore throat, dry cough and myalgia. Sentinel GPs send a combined nasal and throat swab, to the NVRL, on at least one patient per week where a clinical diagnosis of ILI is made. This report includes data on ILI cases reported by sentinel GPs, influenza test results from the NVRL, influenza notifications, registered deaths attributed to influenza, and regional influenza activity reported by the Departments of Public Health.

Results

Clinical Data

Thirteen ILI cases were reported by sentinel GPs during week 49 2005, corresponding to an ILI consultation rate of 11.5 per 100,000 population, a slight decrease from the updated rate of 13.4 per 100,000 population for week 48 2005 (figure 1).

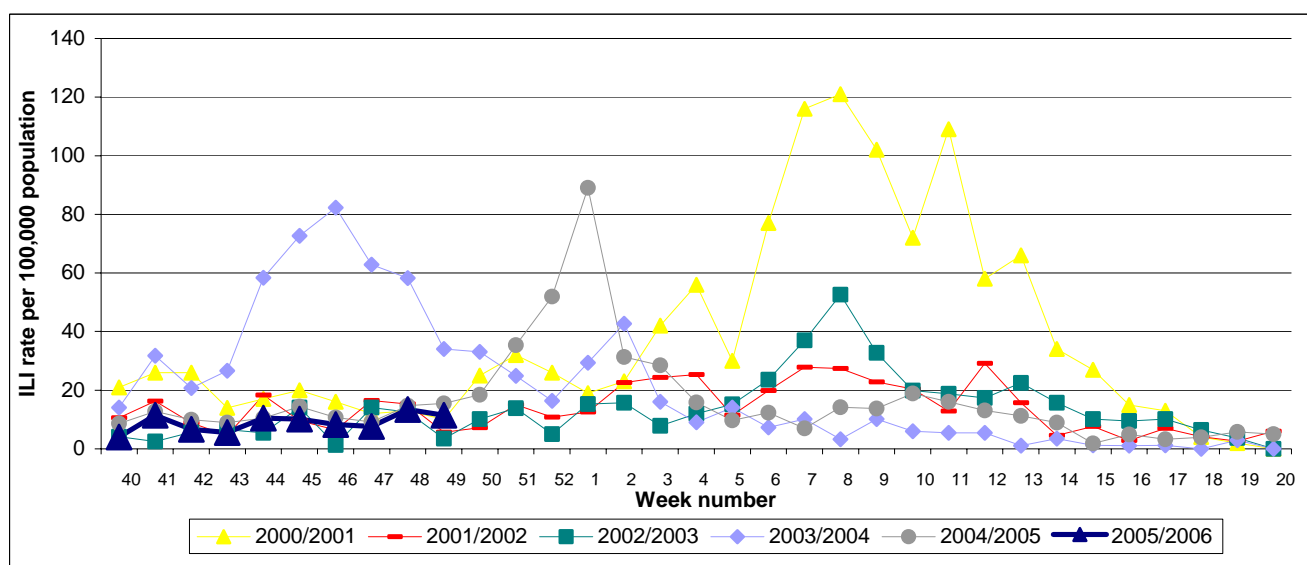


Figure 1: GP consultation rate for ILI per 100,000 population by week, during the 2000/2001, 2001/2002, 2002/2003, 2003/2004, 2004/2005 & 2005/2006 influenza seasons.

Results (continued)

During week 49 2005, one ILI case was aged between 0 and 4 years (12.5 per 100,000 population) and 12 cases were aged between 15 and 64 years of age (15.6 per 100,000 population) (figure 2). Thirty-five (89.7%) sentinel general practices reported during week 49 2005, with nine reporting ILI.

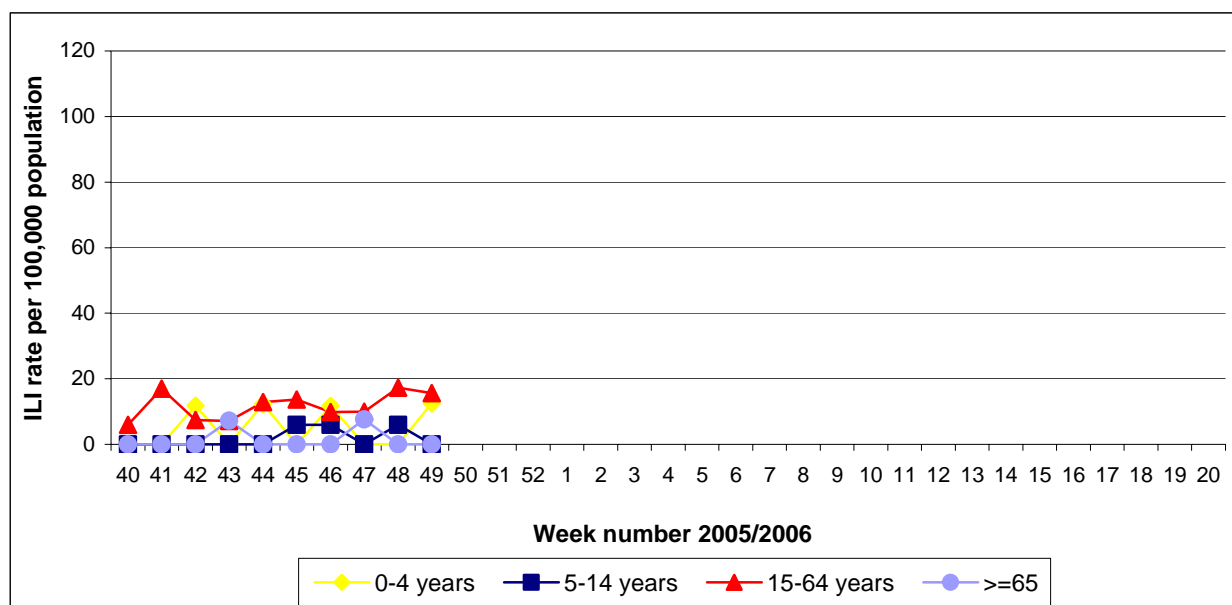


Figure 2: Age specific GP consultation rate* for ILI per 100,000 population by week during the 2005/2006 influenza season. *Please note the denominator used in the age specific consultation rate is from the 2002 census data; this assumes that the age distribution of the sentinel general practices is similar to the national age distribution.

Virological Data from the National Virus Reference Laboratory (NVRL)

To date this season, no positive influenza specimens have been detected by the NVRL (table 1). The NVRL tested ten specimens taken by sentinel GPs during week 49 2005. All were negative for influenza virus. The NVRL also tested 70 non-sentinel specimens, taken during week 49 2005, mainly from hospitalised paediatric cases. All specimens tested negative for influenza. Figure 3 compares the ILI consultation rates by season and the number of positive influenza specimens tested by the NVRL. Twenty-four non-sentinel specimens tested positive for respiratory syncytial virus (RSV) and one non-sentinel specimen was positive for parainfluenza virus type 2. The percentage of RSV positive non-sentinel specimens has been at increased levels in recent weeks (figure 4). RSV causes respiratory symptoms similar to influenza, and is a frequent cause of bronchiolitis in children.

Table 1: Total number of sentinel and non-sentinel* respiratory specimens and positive results for week 49 2005 and the 2005/2006 season to date.

Week Number	Specimen Type	Total Specimens	No. Influenza Positive	% Influenza Positive	Influenza A	Influenza B	RSV
49 2005	Sentinel	10	0	0.0	0	0	NA
	Non-Sentinel	70	0	0.0	0	0	24
	Total	80	0	0.0	0	0	24
40-49 2005	Sentinel	76	0	0.0	0	0	NA
	Non-Sentinel	456	0	0.0	0	0	117
	Total	532	0	0.0	0	0	117

*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.

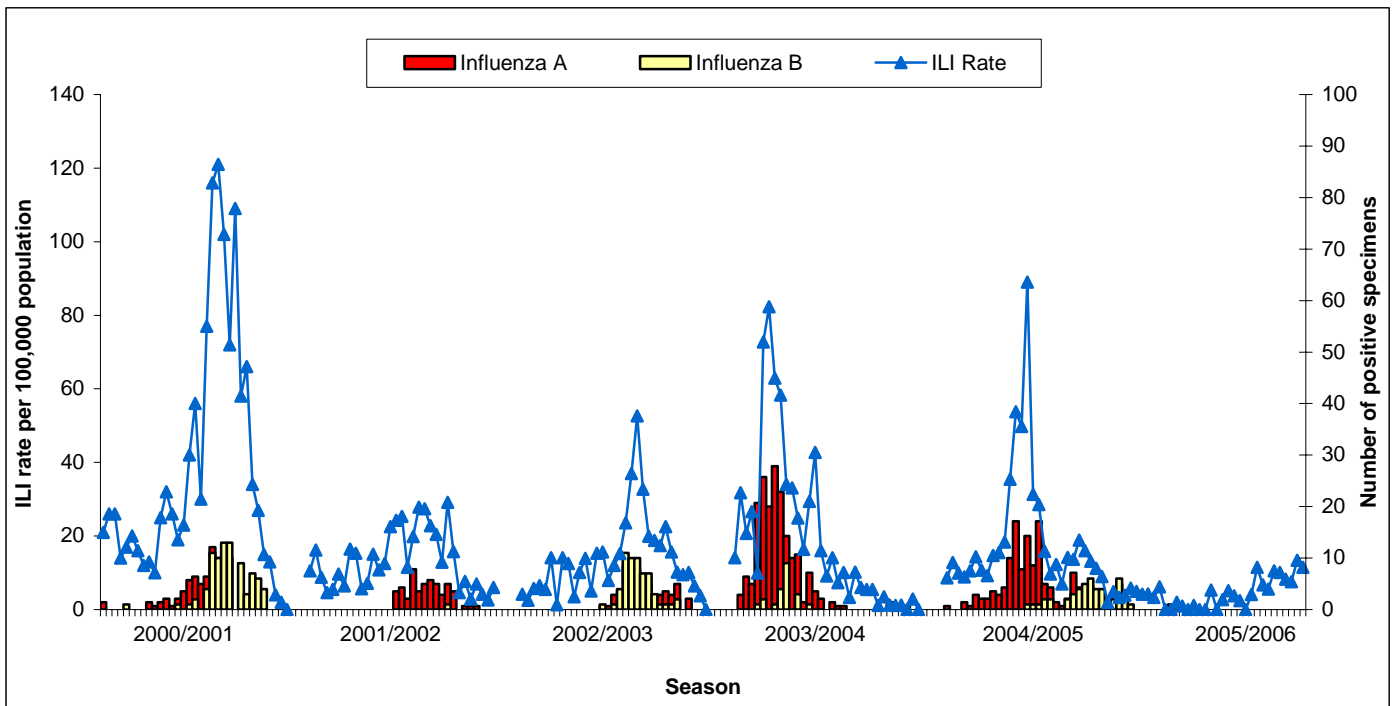


Figure 3: ILI rate per 100,000 population and the number of positive influenza specimens detected by the NVRL during the 2000/2001, 2001/2002, 2002/2003, 2003/2004 & 2004/2005 seasons, summer 2005 and the 2005/2006 season.

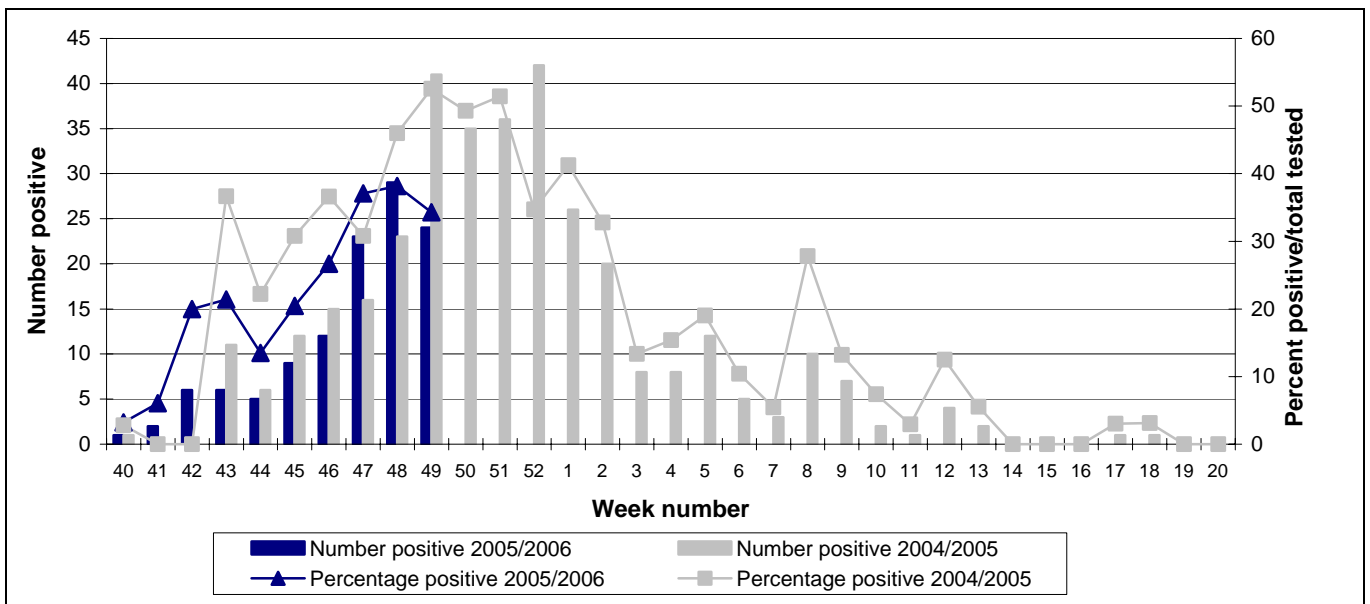


Figure 4. Number and percentage of non-sentinel RSV positive specimens detected during the 2005/2006 and 2004/2005 influenza seasons.

Weekly Influenza Notifications

No influenza notifications were reported to HPSC during week 49 2005. One influenza B case was notified to HPSC during week 40 2005, however this was a late notification from April 2005. Influenza cases notified to HPSC during the summer of 2005 and during the 2005/2006 influenza season are shown in figure 5, and compared to ILI consultation rates.

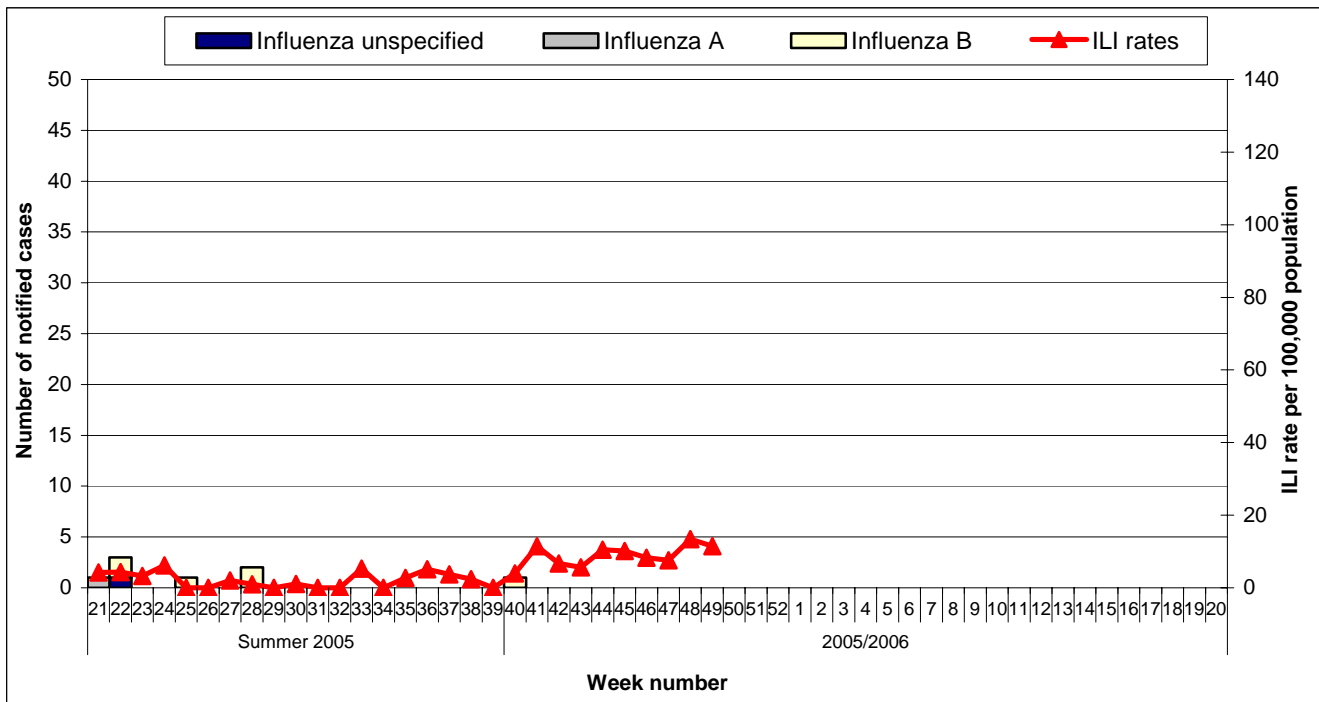


Figure 5: Number of notifications* of influenza (possible & confirmed) by type and by week of notification compared to sentinel GP ILI consultation rates per 100,000 population during the summer of 2005 and the 2005/2006 influenza season. *Notification data are provisional and were extracted from [CIDR](#) on the 14/12/2005 at 10.17 GMT.

Mortality Data

No deaths registered to date this season were attributed to influenza.

Outbreak Reports

No influenza/ILI outbreaks were reported to HPSC to date this season.

Hospital Admissions

Each Department of Public Health has established one sentinel hospital in each HSE-Health Area, to report total hospital admissions, accident and emergency admissions and respiratory admissions data on a weekly basis. There was a slight increase in hospital respiratory admissions in sentinel hospitals in HSE-ER, -NEA and -SEA during week 47 and in HSE-WA during week 48.

School Absenteeism

Sentinel primary and secondary schools have been established in each HSE-Health Area in close proximity to the sentinel GPs, reporting absenteeism data on a weekly basis. During week 48 2005, the mean absenteeism levels in sentinel secondary schools in HSE-SEA increased slightly.

Other Indicators of Influenza Activity

A sporadic case of ILI was reported from a nursing home in HSE-NEA during week 43.

Regional Influenza Activity by HSE-Health Area

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 influenza cases and influenza/ILI outbreaks. Six HSE-Health Areas/Region reported sporadic influenza activity during week 48 2005 (figure 6), based on isolated cases of ILI.

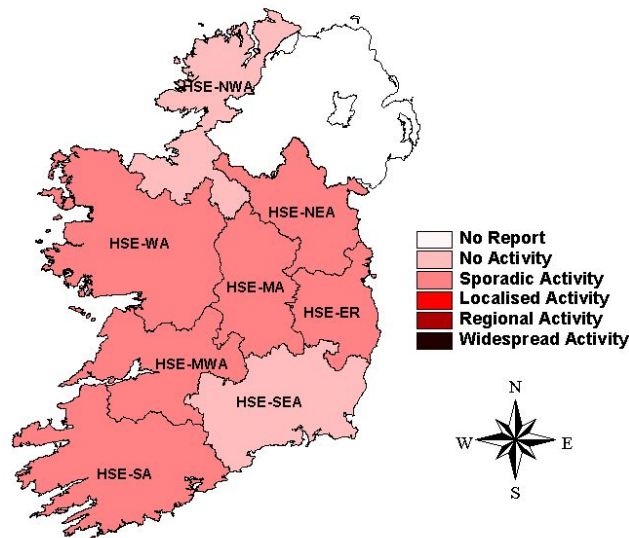


Figure 6: Map of influenza activity by HSE-Health Area during week 48 2005

Influenza Activity in Northern Ireland

Twenty-six cases of ILI were reported by sentinel GPs in Northern Ireland during week 49 2005, corresponding to a rate of 23.2 per 100,000 population. This is a slight decrease from the updated rate of 28.9 per 100,000 for week 48. There have been no laboratory detections of influenza to date this season in Northern Ireland. <http://www.cdscni.org.uk>

Influenza Activity in England, Scotland & Wales

Influenza activity in the United Kingdom remained low during weeks 48 and 49 2005. GP consultations for ILI remain at similar levels to previous weeks with the slightly higher rates recorded amongst those aged over 45 years of age. Influenza activity also remains at baseline levels in Scotland and Wales. During weeks 48 and 49 2005, seven samples referred to the Centre for Infections Respiratory Virus Unit (RVU) were positive for influenza: 4 A (H1) and 3 B. Two influenza B outbreaks in primary schools have been reported during weeks 48 and 49 2005, and an outbreak of respiratory illness in a third primary school is currently being investigated. It is unusual to receive reports of influenza B this early in the influenza season, and this may indicate that the high influenza B activity reported from the southern hemisphere during the summer months of 2005 may occur in the northern hemisphere this winter. Since week 40 2005, three influenza viruses have been further characterised by RVU; A/New Caledonia/20/99 (H1N1)-like, A/California/7/04 (H3N2)- like and B/Tehran/80/02 (similar to influenza B/Hong Kong/330/01). http://www.hpa.org.uk/infections/topics_az/influenza/flureports0506.htm

Influenza Activity in Europe

Clinical influenza activity in Europe remains at baseline levels during week 48 2005. Laboratory confirmed cases of influenza have been found sporadically throughout Europe since week 40 2005: in the Czech Republic, England, Estonia, France, Germany, Hungary, Latvia, Poland, Portugal, Scotland, Slovenia, Spain, Sweden, Switzerland and Wales. So far this season, no clear dominant influenza virus type has emerged, with 59% of total influenza virus detections being influenza A and 41% influenza B. Based on subtyping data of all influenza virus detections reported to the European Influenza Surveillance Scheme (EISS) up to week 48 2005 from sentinel and non-sentinel data (N=56), 20 (36%) were influenza A untyped, 10 (18%) were A(H3) [of which six were A(H3N2)], three (5%) were A(H1) [of which one was A(H1N1)] and 23 (41%) were influenza B. Seven influenza viruses have been antigenically characterised in Europe this season to date: 5 A(H3) A/California/7/2004 (H3N2)-like (3 in Scotland, 1 in England & 1 in Slovenia), 1 A/New Caledonia/20/99 (H1N1)-like in Switzerland, and 1 B/Shanghai/10/2003-like in Scotland. Up to week 48 2005, no human cases of influenza A (H5N1) have been reported in Europe. Whilst

influenza activity in Europe remains low, increases in RSV detections have been reported in Denmark, England, Estonia, France, Ireland, Latvia, the Netherlands and Sweden in recent weeks. <http://www.eiss.org/index.cgi>

Influenza Activity in Canada

During week 48, localised influenza activity was reported in British Columbia and Alberta; sporadic activity was reported in parts of British Columbia, Alberta and Ontario, while the rest of Canada reported no activity. The ILI rate was reported as 15 per 1000 patient visits in week 48, which is below the expected range for this week. The Public Health Agency of Canada received 1472 reports of laboratory tests for influenza, with 8 influenza A and 12 influenza B detections during week 48 2005. During week 48, two new outbreaks of laboratory-confirmed influenza were reported. Since the start of the 2005/2006-influenza season, the National Microbiology Laboratory has antigenically characterised 17 influenza viruses; 10 A/California/07/04-like viruses, 4 B/Hong Kong/330/01-like viruses belonging to the B/Victoria/2/87 lineage, and 3 B/Shanghai/361/02-like viruses belonging to the B/Yamagata/16/88 lineage. <http://www.phac-aspc.gc.ca/fluwatch/index.html>

Influenza Activity in the United States

During week 48 2005, influenza activity occurred at a low level in the United States. The proportion of patient visits to sentinel providers for ILI and the proportion of deaths attributed to pneumonia and influenza were below baseline levels. One state reported localised influenza activity; 29 states, New York City, and Puerto Rico reported sporadic influenza activity; and 20 states and the District of Columbia reported no influenza activity. During week 48, WHO and NREVSS laboratories reported 1,897 specimens tested for influenza viruses, 24 (1.3%) of which were positive: 8 A (H3N2), 1 A (H1N1), 13 A untyped, and 2 influenza B viruses. CDC has antigenically characterised 16 influenza viruses to date this season: 14 influenza A (H3N2) A/California/07/2004-like viruses, one influenza B virus belonging to the B/Yamagata lineage was characterised as B/Florida/07/2004-like and one influenza B virus was identified as belonging to the B/Victoria lineage. <http://www.cdc.gov/flu/>

Influenza Activity Worldwide

During week 48 2005, Brazil (4 B), China (6 A H1 & 2 A H3), Israel (1 A untyped), Mongolia (1 A untyped), the Russian Federation, Tunisia (3 A H1) and the Ukraine all reported sporadic influenza activity. No influenza activity was reported from Mexico. Two influenza A (H1) and 11 A (H3) viruses were reported from Japan during week 48 2005. <http://gamapserver.who.int/GlobalAtlas/home.asp>

Avian Influenza

As of the 14th of December 2005, 138 confirmed human cases and 71 deaths of avian influenza A (H5N1) cases have been reported to the WHO from Indonesian, Vietnam, Thailand, Cambodia and China.

Further information on avian influenza is available on the following websites:

WHO http://www.who.int/csr/disease/avian_influenza/en/

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

ECDC <http://www.ecdc.eu.int/>

Northern Hemisphere Influenza Vaccine for the 2005/2006 Season

The members of the WHO Collaborating Centres on Influenza recommended that influenza vaccines for the 2005/2006 influenza season in the Northern Hemisphere 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

Further information on influenza can be found on the [HPSC website](#)

Acknowledgements

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This report was produced by Dr Lisa Domegan & Dr Joan O'Donnell, HPSC