

# 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.

**Weeks 51 & 52 2005 (19<sup>th</sup> Dec to 1<sup>st</sup> Jan 2005)**

## Summary

During weeks 51 & 52 2005, influenza activity remained at low levels in Ireland, with 28 ILI cases reported by sentinel GPs. One positive influenza A specimen was detected by the NVRL from non-sentinel sources during week 52 2005, this is the first positive influenza specimen of the 2005/2006 season. During week 52 2005, influenza A (H5) was detected in a number of human cases in Turkey, further laboratory tests are being conducted.

## 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 38<sup>0</sup>C 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

During week 51 2005, 20 ILI cases were reported by sentinel GPs, corresponding to an ILI consultation rate of 16.8 per 100,000 population.

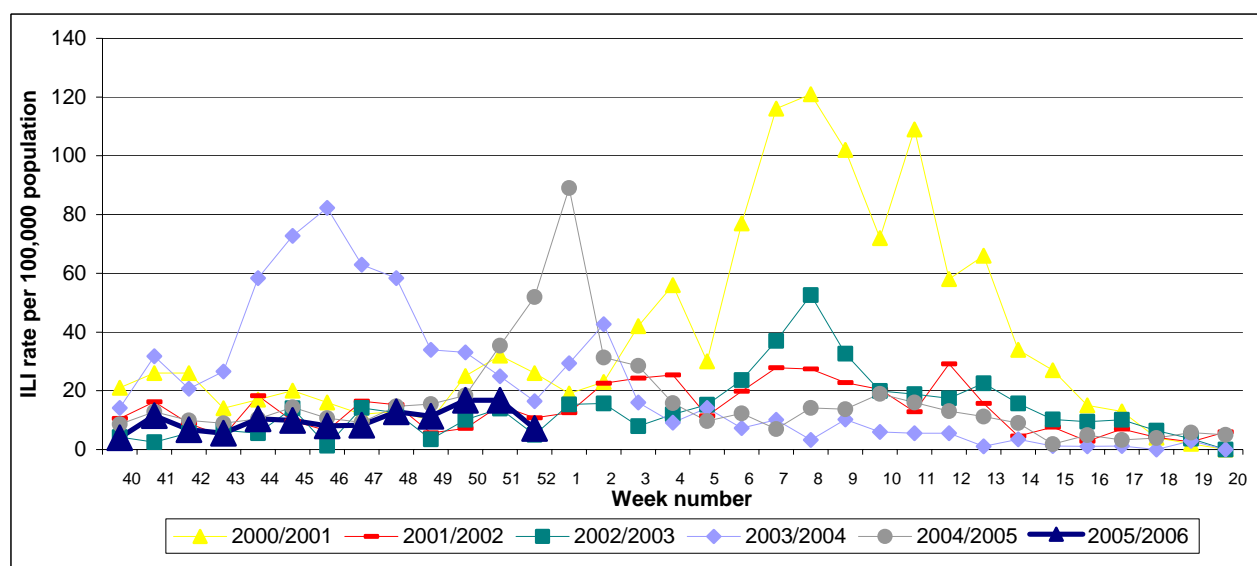
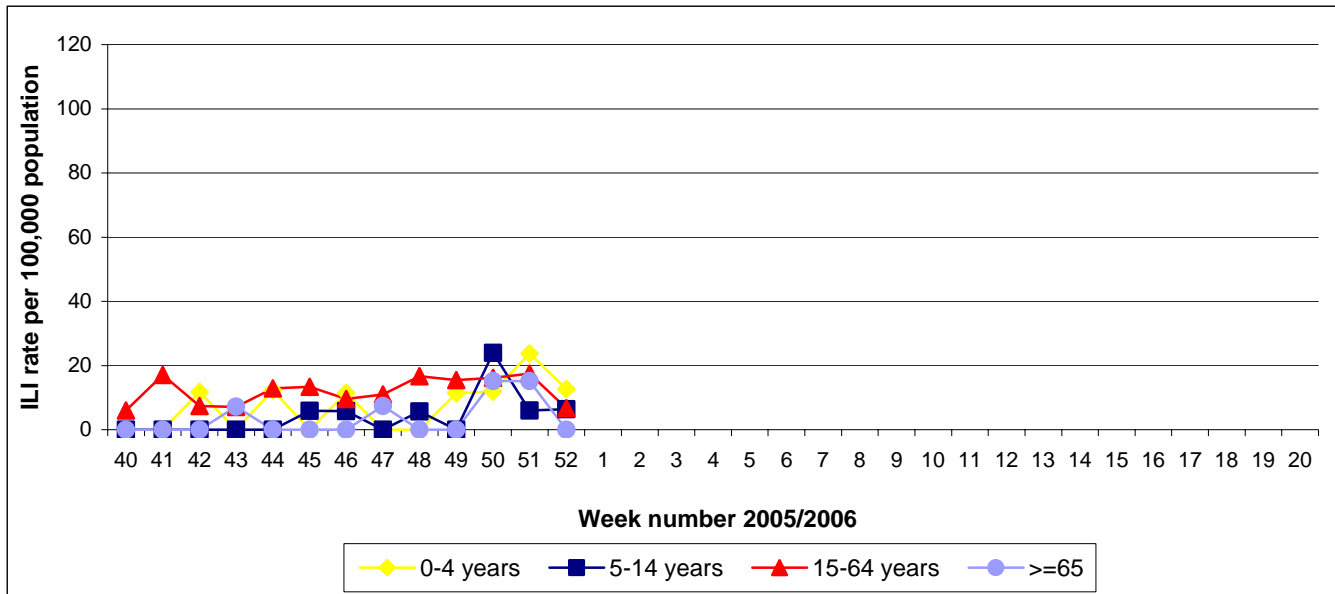


Figure 1: GP consultation rate for ILI per 100,000 population by week, during the 2000/2001, 2001/2002, 2002/2003, 2003/2004, 2004/2005 & 2005/2006 influenza seasons.

## Results (continued)

ILI consultation rates decreased in week 52 to 7.2 per 100,000 population, with eight ILI cases reported (figure 1). During weeks 51 & 52 2005, ILI rates peaked in the 0-4 year age group, with 23.8 and 12.7 ILI cases per 100,000 population, respectively. (figure 2). Thirty-six (92.3%) sentinel general practices reported during week 51 2005, with 14 reporting ILI and 35 (89.7%) reported during week 52 2005, with six reporting ILI. Surveillance of influenza worldwide in week 52 may be affected by reporting delays during the Christmas & New Year holidays. For these reasons caution is necessary in the interpretation of the epidemiological and virological data presented in this report.



**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)***

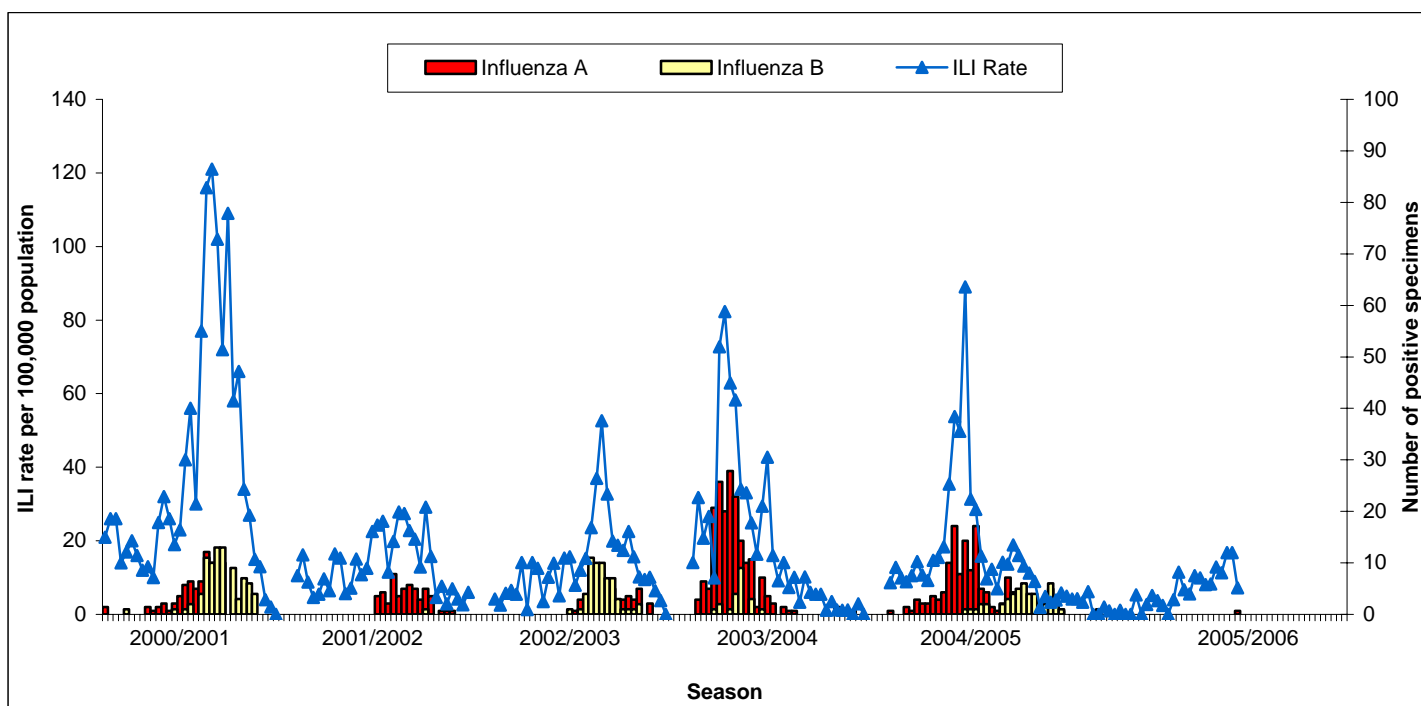
The NVRL tested six specimens taken by sentinel GPs during week 51 2005 and one sentinel specimen during week 52. All sentinel specimens were negative for influenza virus. The NVRL also tested 60 non-sentinel specimens, taken during week 51 2005 and 42 specimens taken during week 52 2005, mainly from hospitalised paediatric cases. All non-sentinel specimens tested negative for influenza virus during week 51 2005. One influenza A (unsubtyped) virus was detected from a non-sentinel specimen during week 52 2005. This is the first influenza positive specimen of the 2005/2006 influenza season (table 1).

Figure 3 compares the ILI consultation rates by season and the number of positive influenza specimens tested by the NVRL. Fifty non-sentinel specimens tested positive for respiratory syncytial virus (RSV) during weeks 51 & 52 2005 (25 in week 51 & 25 in week 52 2005). 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.

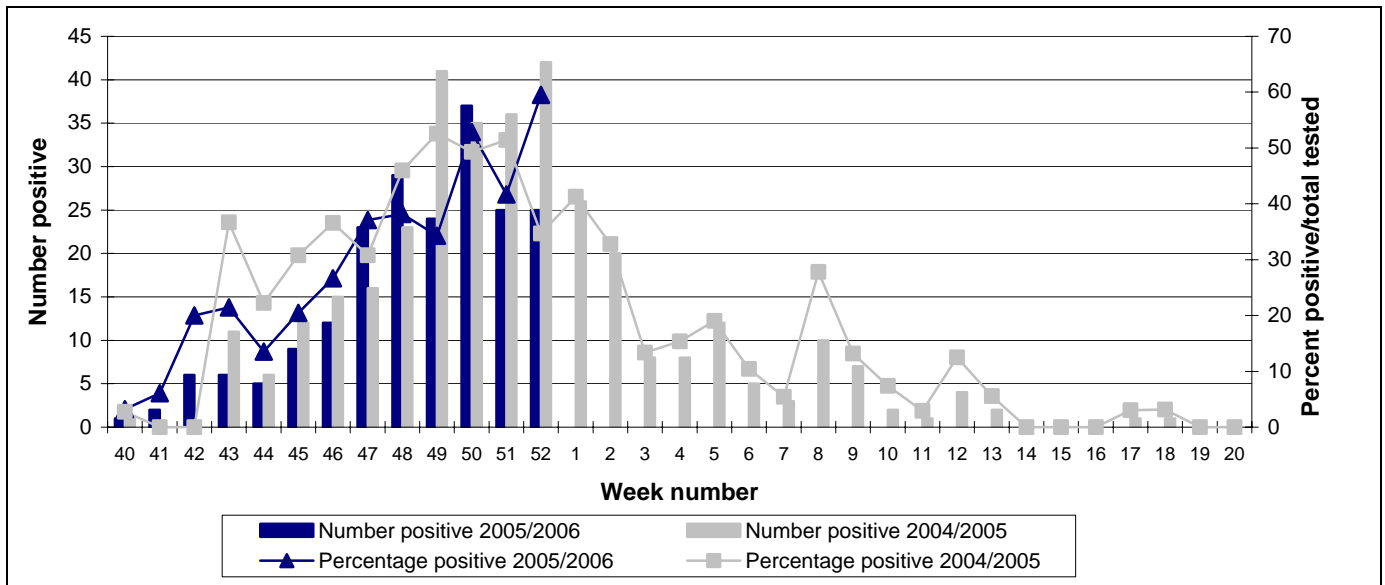
**Table 1:** Total number of sentinel and non-sentinel\* respiratory specimens and positive results for weeks 51 & 52 2005 and the 2005/2006 season to date.

Week Number	Specimen Type	Total Specimens	No. Influenza Positive	% Influenza Positive	Influenza A	Influenza B	RSV
51 2005	Sentinel	6	0	0.0	0	0	NA
	Non-Sentinel	60	0	0.0	0	0	25
	<b>Total</b>	<b>66</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>25</b>
52 2005	Sentinel	1	0	0.0	0	0	NA
	Non-Sentinel	42	1	2.4	0	0	25
	<b>Total</b>	<b>43</b>	<b>1</b>	<b>2.3</b>	<b>0</b>	<b>0</b>	<b>25</b>
40-52 2005	Sentinel	92	0	0.0	0	0	NA
	Non-Sentinel	628	1	0.2	0	0	204
	<b>Total</b>	<b>720</b>	<b>1</b>	<b>0.1</b>	<b>0</b>	<b>0</b>	<b>204</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.



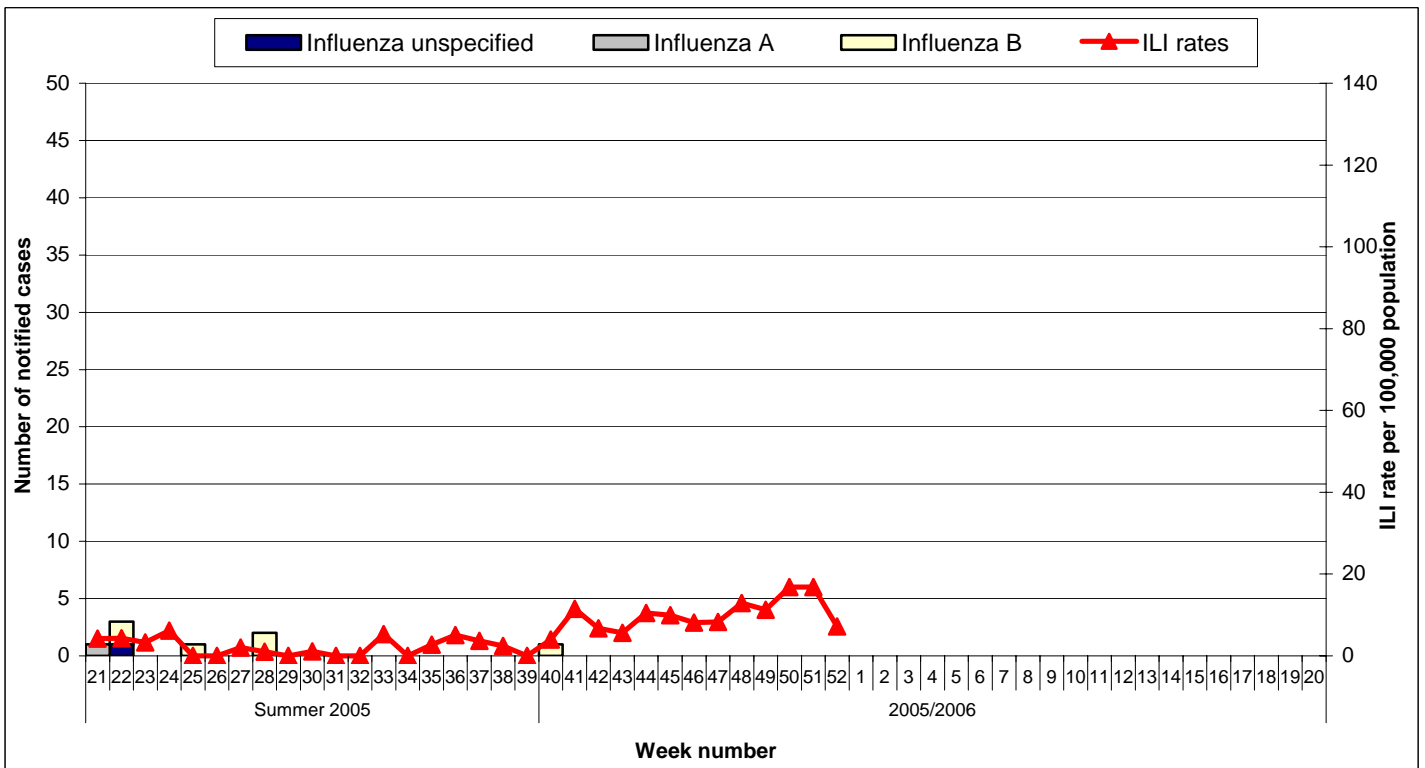
**Figure 3:** ILI rate per 100,000 population and the number of positive influenza specimens detected by the NVRL during the 2000/2001, 2001/2002, 2002/2003, 2003/2004 & 2004/2005 seasons, summer 2005 and the 2005/2006 season.



**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 weeks 51 & 52 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 04/01/2006 at 14.54 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***

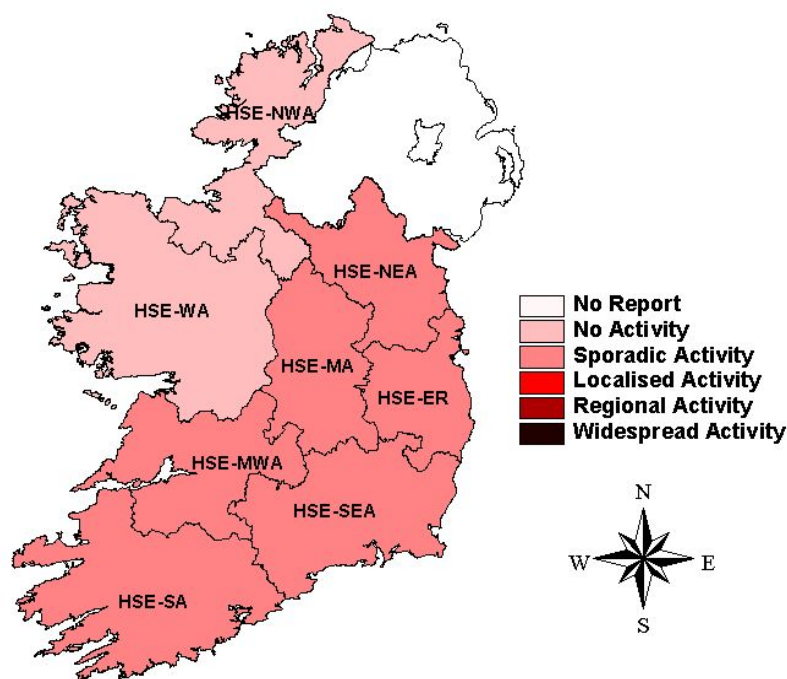
Each Department of Public Health has established one sentinel hospital in each HSE-Health Area, to report total hospital admissions, accident and emergency admissions and respiratory admissions data on a weekly basis. There was a slight increase in hospital respiratory admissions in a sentinel hospital in HSE-WA during weeks 48 and 50 2005.

### ***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. There were no significant increases in absenteeism in sentinel schools reported to HPSC for week 51 2005. No data were available for week 52 2005 as schools were closed for the Christmas and New Year Holiday period.

### ***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 50 2005 (figure 6), based on isolated cases of ILI.



**Figure 6:** Map of influenza activity by HSE-Health Area during week 50 2005

### ***Influenza Activity in Northern Ireland***

Forty cases of ILI and clinical influenza were reported by sentinel GPs in Northern Ireland during week 51 2005, corresponding to a rate of 39.7 per 100,000 population. During week 52 2005, 35 cases of ILI and clinical influenza were reported corresponding to a decreased rate of 29.1 per 100,000 population. 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 remained within baseline levels in England during weeks 51 and 52 2005. GP consultations for ILI remain at similar levels to previous weeks with the slightly higher rates recorded amongst those aged between 45-64 years and in northern and central regions of England. GP consultation rates for ILI continued to remain below baseline in Scotland and Wales during weeks 51 and 52 2005. Detections of influenza, from specimens collected for routine testing and by sentinel systems, remain at low levels with influenza B representing 72% (N=23) of those positive influenza specimens referred to the Centre for Infections. Influenza B viruses from both the influenza B lineages (B/Yamagata/16/88 lineage and B/Victoria/2/87 lineage), that circulated during the 2004/2005 season, have been detected this season.

[http://www.hpa.org.uk/infections/topics\\_az/influenza/flureports0506.htm](http://www.hpa.org.uk/infections/topics_az/influenza/flureports0506.htm)

### ***Influenza Activity in Europe***

Clinical influenza activity in Europe remains at baseline levels. Sporadic influenza activity was reported in the Czech Republic, England, Estonia, France, Scotland and Sweden in week 51 2005. Sporadic cases of influenza have been reported by a number of countries in Europe since week 40 2005. The continued low number of virus detections confirms that there is currently little influenza activity in Europe. Based on subtyping data of all influenza virus detections up to week 51 2005 from sentinel and non-sentinel data (N=146), 52 (36%) were influenza A (unsubtyped), 15 (10%) were A(H3) [of which eight were A(H3N2)], 11 (8%) were A(H1) [of which three were A(H1N1)] and 68 (47%) were influenza B. Based on the characterisation data of all influenza virus detections up to week 51 2005, 39 have been antigenically and/or genetically characterized: seven A(H3) A/California/7/2004 (H3N2)-like, 15 A/New Caledonia/20/99 (H1N1)-like, 12 B/Malaysia/2506/2004-like and five B/Shanghai/10/2003-like. <http://www.eiss.org/index.cgi>. During week 52 2005, influenza A (H5) was detected in a number of human cases in Turkey, further laboratory tests are being conducted.

[http://www.euro.who.int/flu/situation/20060105\\_2](http://www.euro.who.int/flu/situation/20060105_2)

### ***Influenza Activity in Canada***

During week 51 2005, influenza activity was reported as widespread in southern Alberta and localised in one health region of British Columbia. Sporadic activity was reported in parts of Ontario, Quebec, Saskatchewan, British Columbia, Yukon and Alberta, while the rest of Canada reported no activity. The ILI consultation rate was calculated as 20 per 1000 patient visits in week 51, which is below the expected range. During week 51, 12 new outbreaks were reported, one was in a long-term care facility and 11 were in schools. The Public Health Agency of Canada received 1326 reports of laboratory tests for influenza during week 51 2005, with 7 influenza A and 38 influenza B detections. Since the start of the 2005/2006-influenza season, the National Microbiology Laboratory has antigenically characterised 32 influenza viruses; 19 A/California/07/04-like viruses, 10 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. The 2005/2006 season Canadian vaccine contains an A/New Caledonia/20/99 (H1N1)-like, an A/California/7/04 (H3N2)-like, and a B/Shanghai/361/02-like virus strain. <http://www.phac-aspc.gc.ca/fluwatch/index.html>

### ***Influenza Activity in the United States***

During week 51, influenza activity continued to increase in the western United States. The proportion of patient visits to sentinel providers for ILI was above the national baseline. The proportion of deaths attributed to pneumonia and influenza was below the baseline level. Four states reported widespread influenza activity; four states reported regional influenza activity; five states reported localised influenza activity; 31 states, New York City, and Puerto Rico reported sporadic influenza activity; and five states and the District of Columbia reported no influenza activity. During week 51, WHO and NREVSS laboratories reported 1,147 specimens tested for influenza viruses and 155 (13.5%) were positive: 94 A (H3N2), 60 A (unsubtyped) and one B. CDC has antigenically characterised 23 influenza A H3N2 viruses to date this season: 21 influenza A (H3N2) A/California/07/2004-like viruses and two viruses showed reduced titers with antisera produced against A/California/07/2004. Influenza B viruses currently circulating in the US can be divided into two antigenically distinct lineages represented by

B/Yamagata/16/88 and B/Victoria/2/87 viruses. Two of the influenza B viruses isolated belong to the B/Yamagata lineage. One was similar to B/Shanghai/361/2002, the recommended influenza B component for the 2005/2006 influenza vaccine, and one was characterised as B/Florida/07/2004-like. B/Florida/07/2004 is a minor antigenic variant of B/Shanghai/361/2002. The other influenza B virus was identified as belonging to the B/Victoria lineage.  
<http://www.cdc.gov/flu/>

### ***Influenza Activity Worldwide***

During week 51 2005, a regional outbreak was reported in Tunisia (5 A H1 & 1 A H3). Brazil (1 B), China (5 A H1, 2 A H3, 2 A untyped & 8 B), Iran (1 B) and Mongolia (12 A untyped) all reported sporadic influenza activity during week 51 2005 and no influenza activity was reported from Argentina and the Philippines. Four influenza A (H3) and 11 A (H1) viruses, were detected in Japan and Madagascar, respectively during week 51 2005 and one influenza B virus was detected in Morocco. <http://gamapserver.who.int/GlobalAtlas/home.asp>

### ***Avian Influenza***

As of the 30<sup>th</sup> of December 2005, 142 confirmed human cases and 74 deaths of avian influenza A (H5N1) cases have been reported to the WHO from Indonesian, Vietnam, Thailand, Cambodia and China. During week 52 2005, influenza A (H5) was detected in a number of human cases in Turkey, further laboratory tests are being conducted.  
[http://www.euro.who.int/flu/situation/20060105\\_2](http://www.euro.who.int/flu/situation/20060105_2)

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

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

**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**