

# 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 52 2006 (25<sup>th</sup> to 31<sup>st</sup> December 2006)

## Summary

During week 52 2006, influenza activity was at low levels in Ireland, with 16 influenza-like illness (ILI) cases reported by sentinel GPs. No specimens tested by the NVRL were positive for influenza virus during week 52.

## Background

This is the seventh 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. Forty-six 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°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 during the influenza season. 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

Sixteen ILI cases were reported from sentinel GPs during week 52 2006, corresponding to an ILI consultation rate of 12.7 per 100,000 population, an increase from the rate of 11.5 in week 51 (figure 1).

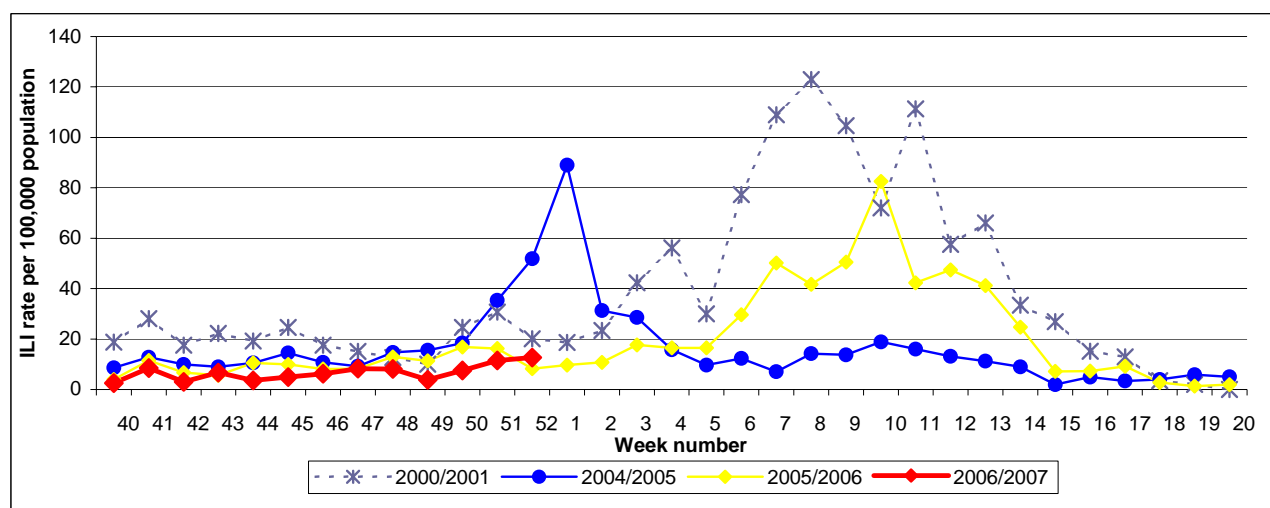
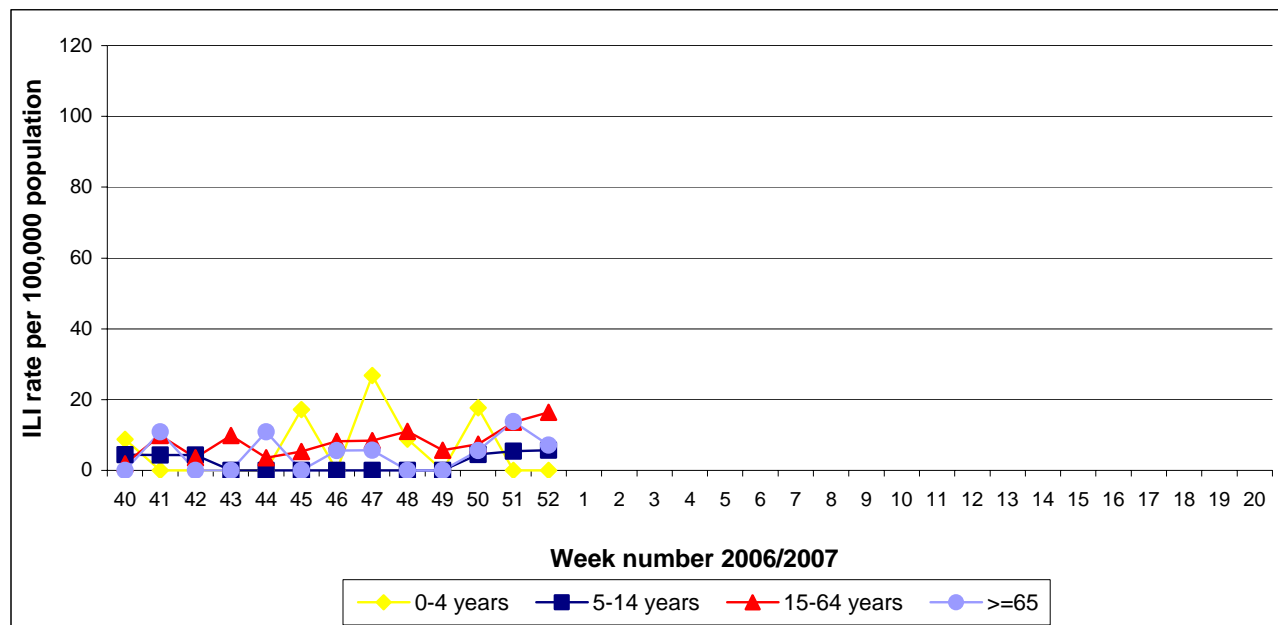


Figure 1: GP consultation rate for ILI per 100,000 population by week, during the 2000/2001\*, 2004/2005, 2005/2006 & 2006/2007 influenza seasons.

\* Highest recorded levels of ILI activity since initiation of sentinel surveillance.

## Results (continued)

One case was in the 5-14 year age group (5.7 per 100,000 population), 14 cases were in the 15-64 year age group (16.5 per 100,000 population) and one case was in the 65 years and older age group (7.2 per 100,000 population) as shown in figure 2. Thirty-six of the 46 (78.3%) sentinel general practices reported during week 52 2006, with 10 reporting ILI.



**Figure 2:** Age specific GP consultation rate\* for ILI per 100,000 population by week during the 2006/2007 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.

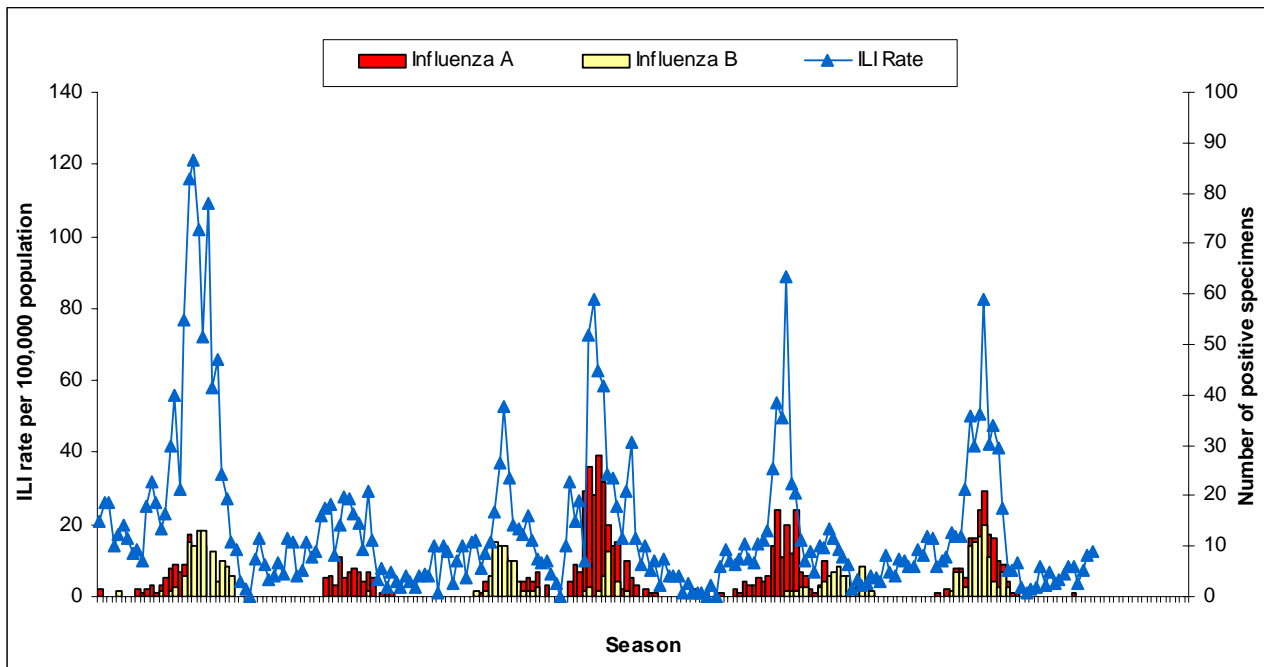
### *Virological Data from the National Virus Reference Laboratory (NVRL)*

The NVRL tested three specimens taken by sentinel GPs during week 52 2006, all of which were negative for influenza virus. The NVRL also tested 33 non-sentinel specimens taken during week 52 2006, mainly from hospitalised paediatric cases. Seven non-sentinel specimens were positive for respiratory syncytial virus (RSV) and none were positive for influenza virus (table 1). Figure 3 compares the ILI consultation rates by season and the number of positive influenza specimens tested by the NVRL. Figure 4 compares the number and percentage of non-sentinel RSV positive specimens detected during the 2005/2006 and 2006/2007 influenza seasons

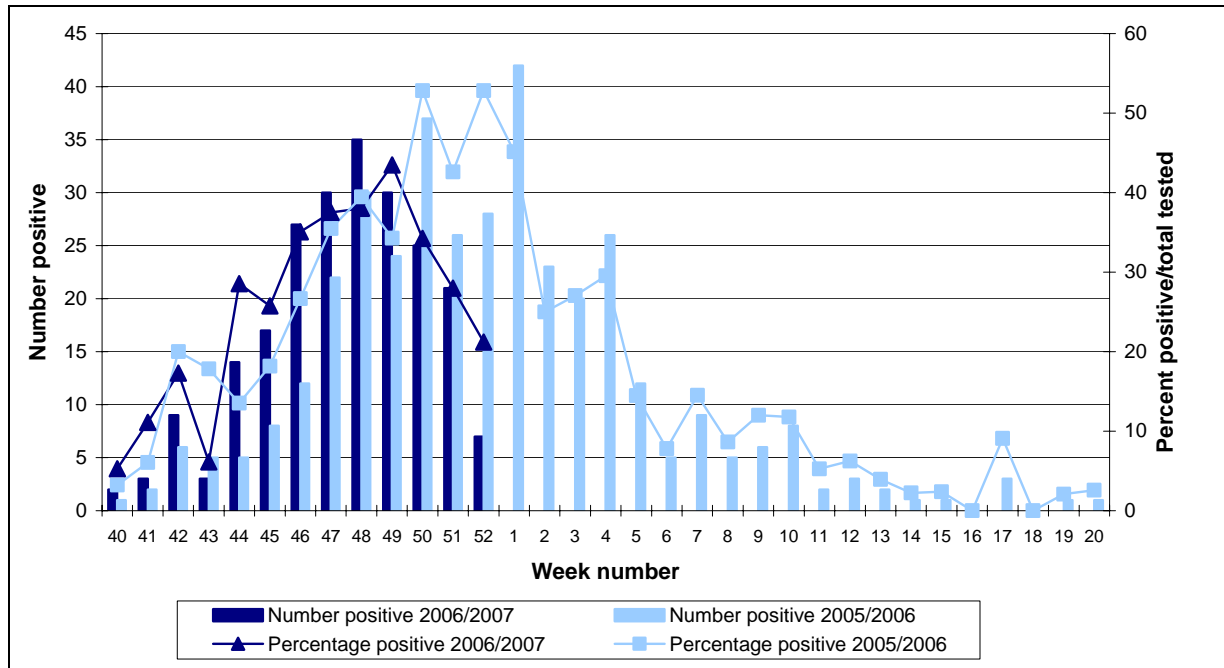
**Table 1:** Number of sentinel and non-sentinel\* respiratory specimens and positive results for week 52 2006 and the 2006/2007 season to date

Week Number	Specimen Type	Total Specimens	No. Influenza Positive	% Influenza Positive	Influenza A	Influenza B	RSV
<b>52 2006</b>	Sentinel	3	0	0.0	0	0	NA
	Non-Sentinel	33	0	0.0	0	0	7
	<b>Total</b>	<b>36</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>7</b>
<b>40-52 2006</b>	Sentinel	69	1	1.4	1	0	NA
	Non-Sentinel	780	0	0.0	0	0	223
	<b>Total</b>	<b>849</b>	<b>1</b>	<b>0.1</b>	<b>1</b>	<b>0</b>	<b>223</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.



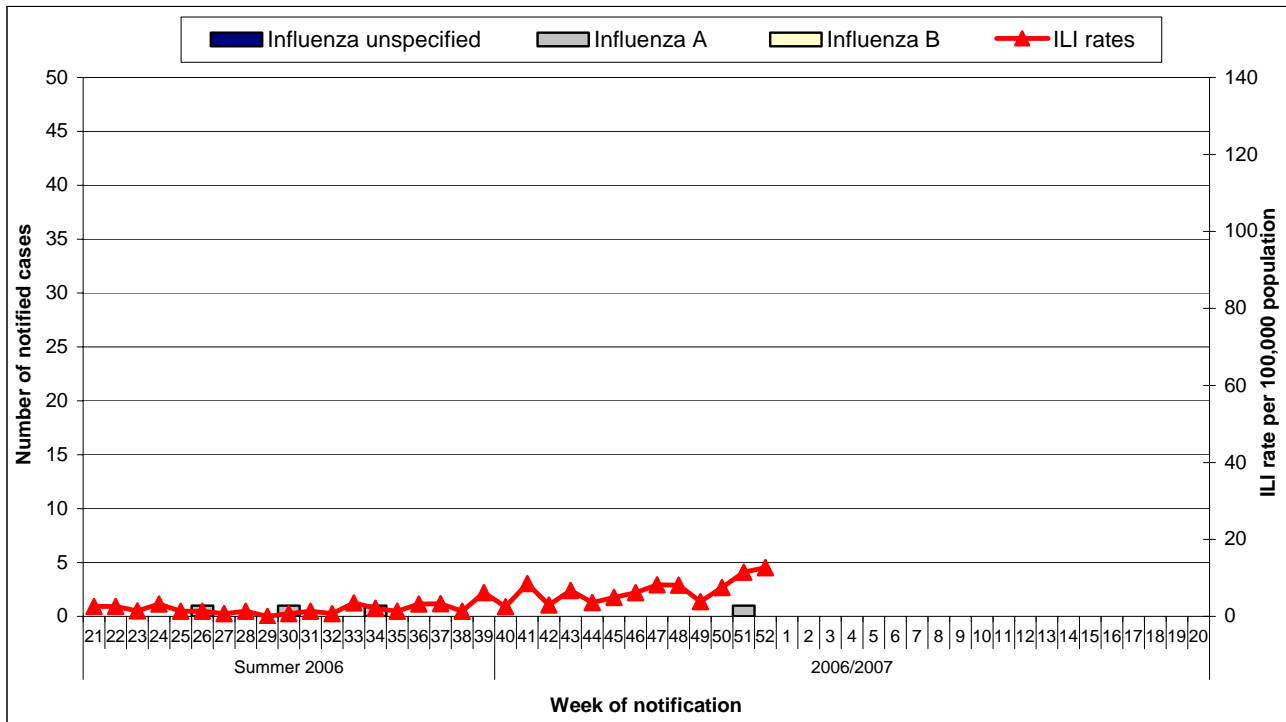
**Figure 3:** ILI rate per 100,000 population and the number of positive influenza specimens detected by the NVRL during the 2000/2001, 2001/2002, 2002/2003, 2003/2004, 2004/2005, 2005/2006 & 2006/2007 seasons.



**Figure 4.** Number and percentage of non-sentinel RSV positive specimens detected during the 2005/2006 and 2006/2007 influenza seasons.

### Weekly Influenza Notifications

No influenza cases were notified to HPSC during week 52 2006. Influenza cases notified to HPSC during the summer of 2006 and during the 2006/2007 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 2006 and the 2006/2007 influenza season.

\*Notification data are provisional and were extracted from [CIDR](#) on the 03/01/2007 at 14.21

### Mortality Data

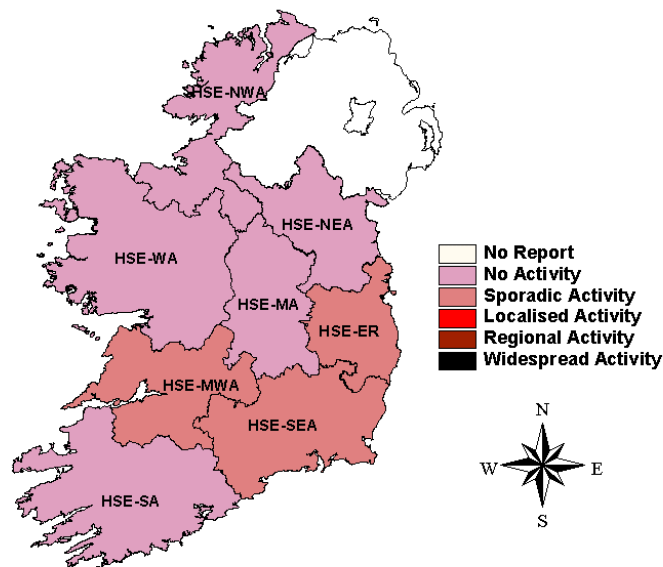
No deaths registered during week 52 2006 were attributed to influenza.

### Outbreak Reports

No influenza/ILI outbreaks were reported to HPSC during week 52 2006.

### ***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. Each Department of Public Health has established one sentinel hospital in each HSE-Area, to report total hospital admissions, accident and emergency admissions and respiratory admissions data on a weekly basis. Sentinel primary and secondary schools were also established in each HSE-Area in close proximity to the sentinel GPs, reporting absenteeism data on a weekly basis. Sporadic influenza activity, based on isolated cases of ILI, was reported by HSE-ER, -MWA and -SEA. No activity was reported from, HSE-MA, -NEA -NWA, -SA and -WA during week 51 2006 (figure 6).



**Figure 6:** Map of influenza activity by HSE-Health Area during week 51 2006

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

Eighty-three ILI cases and five cases of clinical influenza were reported from sentinel GPs in Northern Ireland during week 52 2006, corresponding to a combined rate of 128.0 per 100,000 population, an increase from the updated rate of 120.1 per 100,000 population during week 51. No influenza virus was detected during week 52 2006. <http://www.cdscni.org.uk>

### ***Influenza Activity in England, Scotland & Wales***

Clinical influenza activity in England and Wales is currently well within baseline levels. Activity in Scotland has increased above the baseline threshold. During weeks 51 and 52 2006 five samples referred to the Centre for Infections Respiratory Virus Unit (RVU) tested positive for RSV while eight samples tested positive for influenza A(H3) and one for influenza A(H1).

<http://www.hpa.org.uk/infections/topics%5Faz/influenza/seasonal/activity0607/flureport.htm>

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

During week 51 2006, national network levels of influenza-like illness (ILI) and/or acute respiratory infection (ARI) were at a low level in 21 countries. Sweden reported a medium intensity of influenza activity with regional activity in the north. Sporadic regional activity (i.e. isolated cases of laboratory confirmed influenza) was reported in eight countries and 13 countries reported no activity. So far this season, the consultation rates for ILI and/or ARI have been at baseline levels across the whole of Europe. The total number of respiratory specimens collected by sentinel physicians was 457, of which 22 (4.8%) were positive for influenza virus, which were all type A. In addition, 34 specimens from non-sentinel sources (e.g. specimens collected for diagnostic purposes in hospitals) tested positive for influenza virus, of which 32 (94%) were influenza A and two (6%) influenza B. Of the 54 sentinel and non-sentinel specimens positive for influenza A virus only three have been subtyped and all three were (H3). Based on subtyping data of all influenza virus detections (N=276; sentinel and non-sentinel data), 195 (71%) were type A unsubtyped, 10 (4%) were A(H1), six (2%) were A(H1N1), 24 (9%) were A(H3), 23 (8%) were A(H3N2) and 18 (6%) were type B.

<http://www.eiss.org/index.cgi>

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

During week 51, overall influenza activity in Canada was similar to the previous week. Localised influenza activity was reported in two regions in Ontario, sporadic activity was reported in regions in Saskatchewan, Ontario and Quebec, while the rest of the country reported no activity. In week 51, 7% (179/2,559) of the specimens tested for influenza virus were positive and 98% (176/179) were influenza A viruses. Of the influenza virus detections to date this season, 99% (543/551) were influenza A viruses. The ILI consultation rate was 29 per 1,000 patient visits, which is within the expected range for this week and the sentinel response rate was low over the holidays (54%). Note that the percent positive for RSV detections started to decline in week 49 but remains high (18%). The National Microbiology Laboratory (NML) has characterised 74 influenza viruses for the 2006-2007 influenza season: 27 were A/Wisconsin/67/05(H3N2)-like, 45 were A/New Caledonia/20/1999(H1N1)-like, 1 B/Malaysia/2506/2004-like, and 1 B/Shanghai/361/2002-like. All but the B/Shanghai/361/2002-like strain are included in the composition of the 2006-2007 Canadian influenza vaccine. Of the influenza A viruses characterised, 98% (44/45) of the A(H1N1) viruses were from the West and 96% (26/27) of the A(H3N2) viruses were from Ontario.

<http://www.phac-aspc.gc.ca/fluwatch/index.html>

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

During week 51, influenza activity increased in the United States. Among specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories for influenza, 10.1% were positive. Four states reported widespread influenza activity, twelve states reported regional influenza activity, five states and the District of Columbia reported local influenza activity, 25 states and New York City reported sporadic influenza activity, one state reported no influenza activity and three states did not report. The reporting of widespread or regional influenza activity increased from 12 states for week 50 to 17 states for week 51. On a national level, laboratory and outpatient influenza-like illness (ILI) surveillance data indicated an increase from week 49 to week 51 and ILI was above baseline for the second consecutive week this season. One influenza-associated paediatric death was reported during week 51. However, the percent of deaths due to pneumonia and influenza remained below baseline level. During week 51, WHO and NREVSS laboratories reported 1,926 specimens tested for influenza viruses, 195 (10.1%) of which were positive: 72 influenza A (H1) viruses, 1 influenza A (H3) virus, 77 influenza A viruses that were not subtyped and 45 influenza B viruses. Since October 1 2006, WHO and NREVSS laboratories have tested a total of 37,281 specimens for influenza viruses and 1,571 (4.2%) were positive. Among the 1,571 influenza viruses, 1,250 (79.6%) were influenza A viruses and 321 (20.4%) were influenza B viruses. Three hundred seventy-six (30.1%) of the 1,250 influenza A viruses have been subtyped: 359 (95.5%) were influenza A(H1) viruses and 17 (4.5%) were influenza A(H3) viruses.

<http://www.cdc.gov/flu/>

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

During week 51 2006 the following influenza isolates were reported; China 7 (2 A untyped, 2 A(H1), 2 A(H3) and 1 B), Iran 2 B, Madagascar 1 B, New Caledonia 8 (7 A(H3) and 1 A untyped) and Tunisia 5 influenza untyped.

<http://gamapserver.who.int/GlobalAtlas/home.asp>

### ***Avian Influenza***

As of the 27<sup>th</sup> December 2006, 261 confirmed human cases and 157 (60%) deaths from avian influenza A (H5N1) have been reported to the WHO from Azerbaijan, Cambodia, China, Djibouti, Egypt, Indonesia, Iraq, Thailand, Turkey and Vietnam.

The Egyptian Ministry of Health and Population has informed WHO of three new human cases of avian influenza A(H5N1) virus infection. All three cases belong to one extended family in Gharbiyah province, 80 kilometres northwest of the capital city, Cairo. While being transferred and cared for at the country's designated avian influenza hospital, a 30 year-old female, a 15 year-old girl and a 26 year-old male died. The most recent death occurred on 27 December. The cases reportedly had contact with sick poultry (ducks). Clinical specimens from the three cases were tested positive for avian influenza A(H5N1) virus by the Egyptian Central Public Health Laboratory. The virus was also detected in specimens from two of the three patients by the US Naval Medical Research Unit No.3 (NAMRU-3). The samples will be sent to a WHO Collaborating Centre for further testing including virus characterisation.

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.ndsc.ie/hpsc/A-Z/Respiratory/AvianInfluenza/>

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

### ***Northern Hemisphere Influenza Vaccine for the 2006/2007 Season***

The members of the WHO Collaborating Centres on Influenza recommended that influenza vaccines for the 2006/2007 influenza season in the Northern Hemisphere contain the following strains:

- an A/New Caledonia/20/99(H1N1)-like virus;
- an A/Wisconsin/67/2005 (H3N2)-like virus<sup>a</sup>;
- a B/Malaysia/2506/2004-like virus<sup>b</sup>

Candidate vaccine viruses include:

<sup>a</sup>A/Wisconsin/67/2005 (H3N2) and A/Hiroshima/52/2005

<sup>b</sup>B/Malaysia/2506/2004 virus and B/Ohio/1/2005

<http://www.who.int/csr/disease/influenza/recommendations2007north/en/index.html>

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

#### **Acknowledgements**

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**This report was produced by Sarah Jackson & Dr. Joan O'Donnell, HPSC**