

# 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 2007 (3<sup>rd</sup> – 9<sup>th</sup> December 2007)

## Summary

During week 49 2007, influenza activity was at low levels in Ireland. Influenza-like illness (ILI) consultation rates decreased slightly during week 49 2007, but remain within expected levels for the time of year. Two influenza positive specimens were detected by the NVRL during week 49 2007. Respiratory syncytial virus (RSV) detections increased slightly during week 49 2007 and are at similar levels to the same period last season.

## Background

This is the eighth 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. Fifty 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

Fifteen ILI cases were reported from sentinel GPs during week 49 2007, corresponding to an ILI consultation rate of 9.8 per 100,000 population, a decrease from the updated rate of 13.5 per 100,000 in week 48 2007 (figure 1). Forty-two of 50 (84.0%) sentinel general practices reported during week 49 2007, with nine reporting ILI cases.

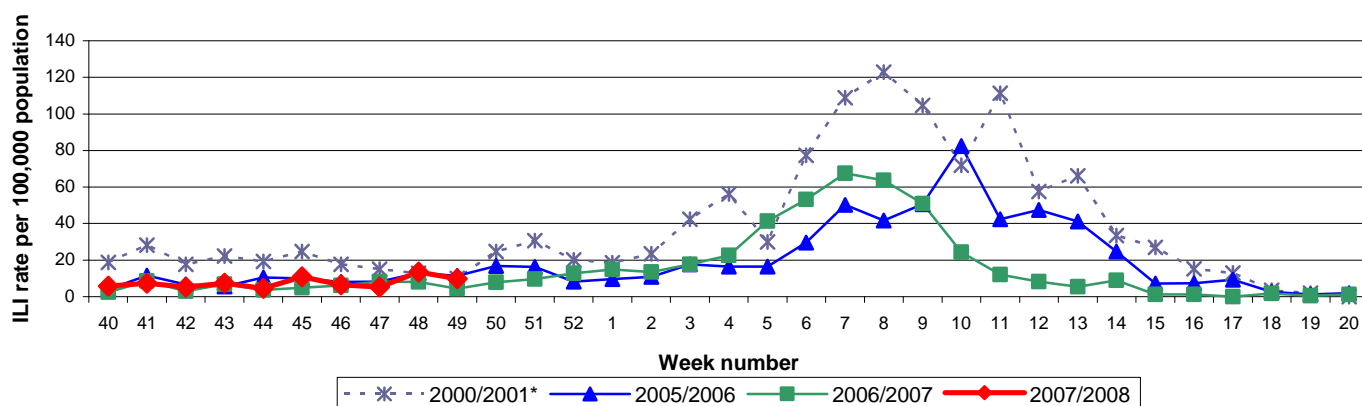
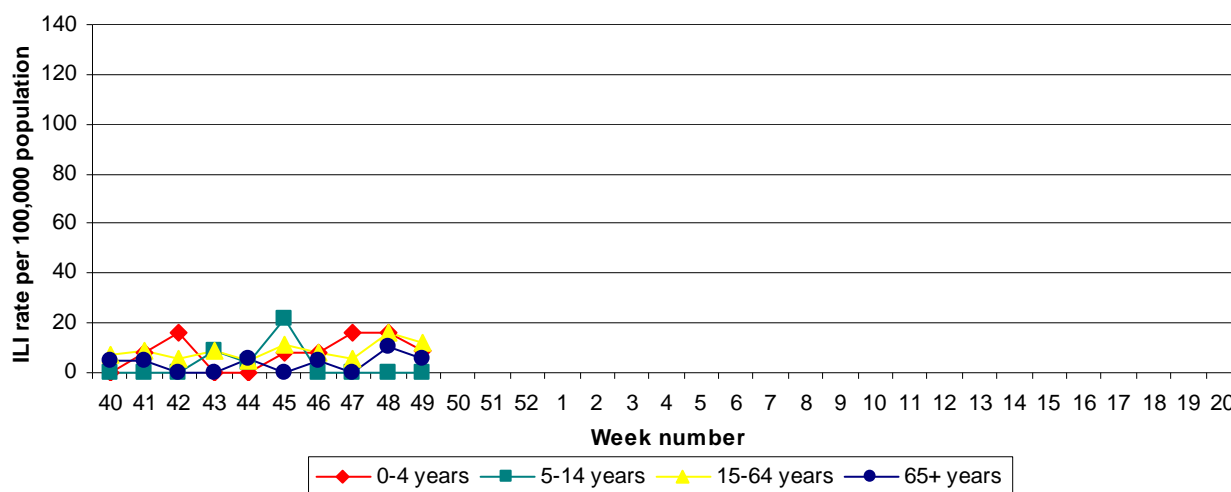


Figure 1: GP consultation rate for ILI per 100,000 population by week, during the 2000/2001\*, 2005/2006, 2006/2007 & 2007/2008 influenza seasons \*Highest recorded levels of ILI activity since initiation of sentinel surveillance

## Results (continued)

During week 49 2007, one ILI case was reported in the 0-4 year age group (9.1 per 100,000 population), 13 ILI cases were reported in the 15-64 year age group (12.3 per 100,000 population) and one ILI case was reported in those aged 65 years or older (5.9 per 100,000 population), as shown in figure 2. No ILI cases were reported in those aged 5-14 years.



**Figure 2:** Age specific GP consultation rate\* for ILI per 100,000 population by week during the 2007/2008 influenza season  
\*Please note the denominator used in the age specific consultation rate is from the 2006 census data; this assumes that the age distribution of the sentinel general practices is similar to the national age distribution.

### Virological Data from the NVRL

The NVRL tested five specimens taken by sentinel GPs during week 49 2007, one of which was positive for influenza A (unsubtyped). The NVRL also tested 97 non-sentinel specimens taken during week 49 2007, mainly from hospitalised paediatric cases. One non-sentinel specimen was positive for influenza B and 44 were positive for respiratory syncytial virus (RSV) (table 1). To date this season, four specimens have tested positive for influenza: 2 A (unsubtyped) and 1 A (H3) viruses from sentinel sources and one influenza B virus from non-sentinel sources. NVRL detections of RSV from non-sentinel sources increased slightly during week 49 2007 and are now at similar levels to the same period last season (figure 4). High levels of RSV detections at this time of the year are a normal epidemiological phenomenon, with detections usually peaking in December/early January and then declining. To date this season, the NVRL has detected the following positive specimens from non-sentinel sources: 255 RSV, 2 Adenovirus, 2 parainfluenza virus (PIV) type-1, 1 PIV-2 and 5 PIV-3. Influenza positive specimens by HSE-Area and age group (in years) for week 49 2007 and the 2007/2008 season to date are shown in tables 2 and 3, respectively. 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 2006/2007 and 2007/2008 influenza seasons.

**Table 1:** Number of sentinel and non-sentinel\* respiratory specimens and positive results for week 49 2007 and the 2007/2008 season to date

Week Number	Specimen Type	Total Specimens	No. Influenza Positive	% Influenza Positive	Influenza A	Influenza B	RSV	% RSV Positive
<b>49 2007</b>	Sentinel	5	1	20.0	1	0	NA	NA
	Non-Sentinel	97	1	1.0	0	1	44	45.4
	<b>Total</b>	<b>102</b>	<b>2</b>	<b>2.0</b>	<b>1</b>	<b>1</b>	<b>44</b>	<b>43.1</b>
<b>Season to date</b>	Sentinel	68	3	4.4	3	0	NA	NA
	Non-Sentinel	701	1	0.1	0	1	249	35.5
	<b>Total</b>	<b>769</b>	<b>4</b>	<b>0.5</b>	<b>3</b>	<b>1</b>	<b>249</b>	<b>32.4</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

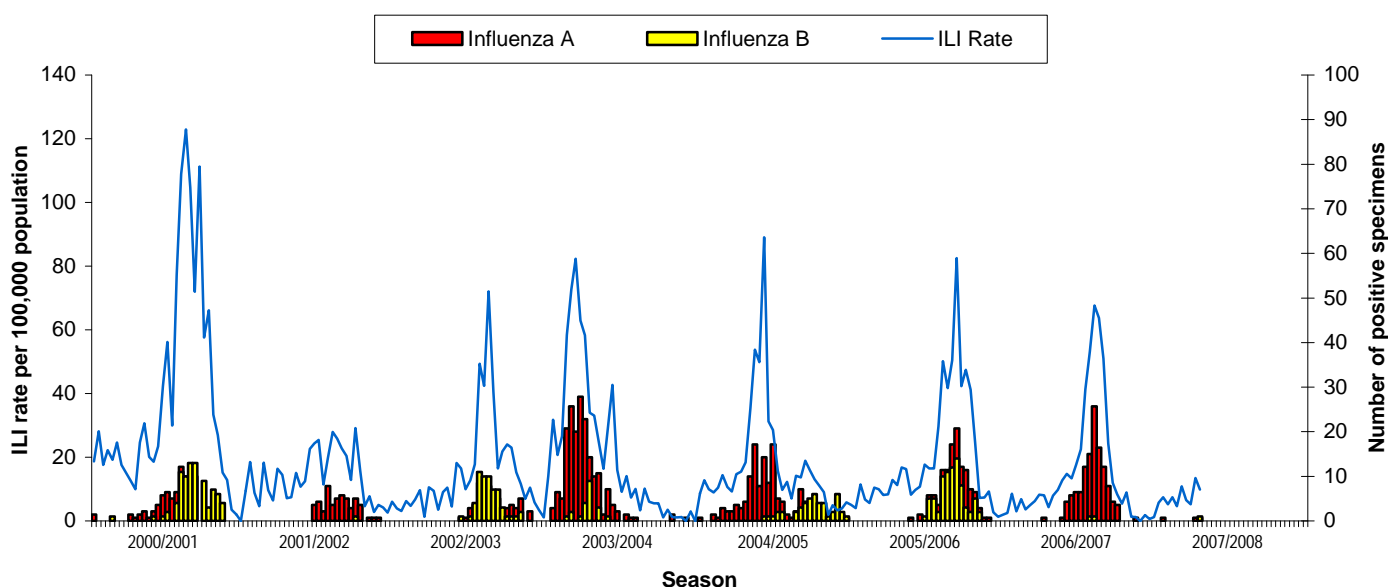
**Table 2:** Total number of sentinel and non-sentinel\* influenza A and B positive specimens by HSE-Area for week 49 2007 and the 2007/2008 season to date

	Week 49 2007			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
HSE-ER	1	1	2	1	1	2
HSE-M	0	0	0	0	0	0
HSE-MW	0	0	0	0	0	0
HSE-NE	0	0	0	1	0	1
HSE-NW	0	0	0	0	0	0
HSE-SE	0	0	0	0	0	0
HSE-S	0	0	0	1	0	1
HSE-W	0	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>4</b>

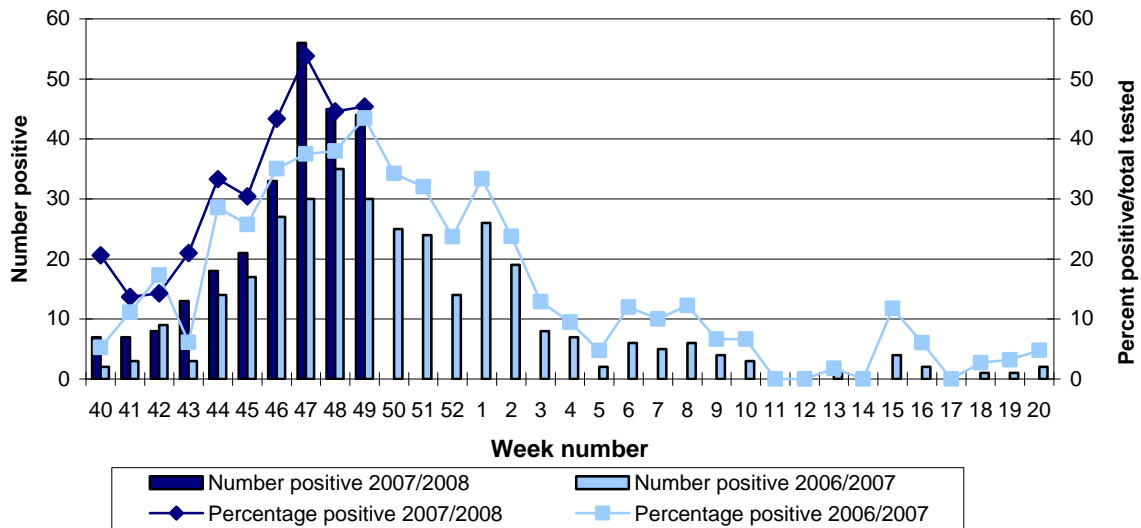
\* Please note that non-sentinel specimens include all specimens referred to the NVRL, these specimens are mainly from hospitals and some GPs and may include more than one specimen from each case

**Table 3:** Total number of sentinel and non-sentinel\* influenza A and B positive specimens by age group (in years) for week 49 2007 and the 2007/2008 season to date

	Week 49 2007			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
0-4 years	0	0	0	0	0	0
5-14 years	0	0	0	0	0	0
15-64 years	1	1	2	3	1	4
65 years and older	0	0	0	0	0	0
Age group unknown	0	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>4</b>



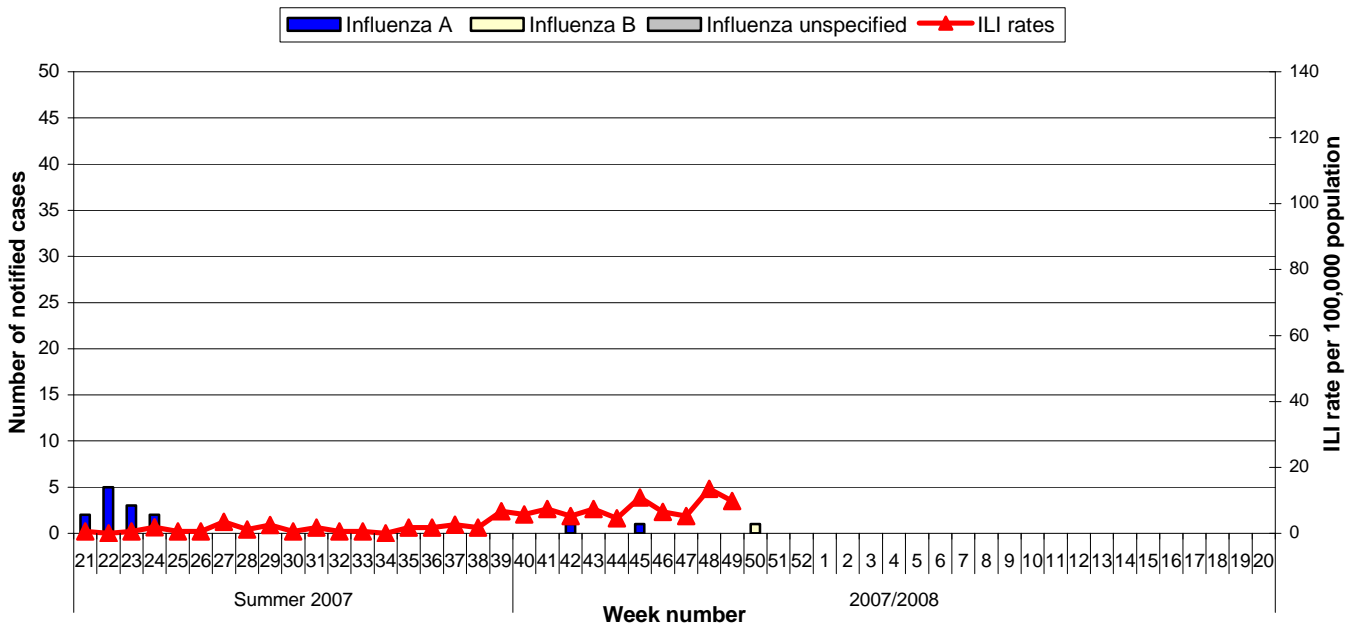
**Figure 3:** GP ILI consultation rate per 100,000 population and the number of positive influenza specimens detected by the NVRL by week and season, 2000/2001 - 2007/2008



**Figure 4.** Number and percentage of non-sentinel RSV positive specimens detected during the 2006/2007 and 2007/2008 influenza seasons

**Weekly Influenza Notifications**

One influenza B case from HSE-E was notified to HPSC during week 50 2007. Influenza cases notified to HPSC during the summer of 2007 and during the 2007/2008 influenza season are shown in figure 5 and compared to GP 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 2007 and the 2007/2008 influenza season  
 \*Notification data are provisional and were extracted from [CIDR](#) on the 12/12/2007 at 05:16

**Mortality Data**

No influenza associated deaths were registered with the GRO and reported to HPSC to date this season.

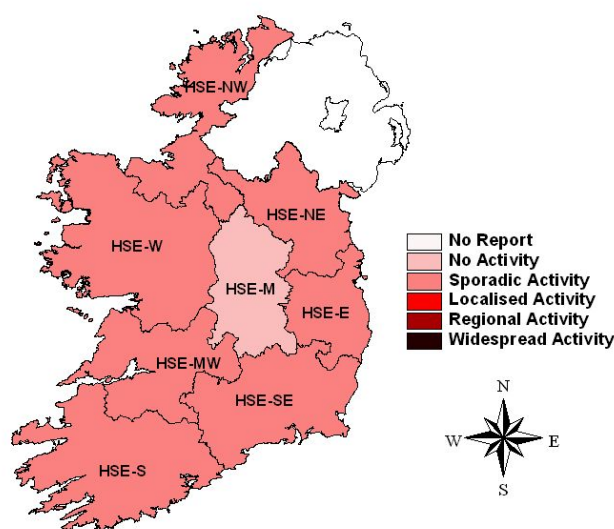
**Outbreak Reports**

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

### ***Regional Influenza Activity by HSE-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 ILI/influenza 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.

Increased respiratory admissions were reported in four sentinel hospitals in HSE-M, -NW, -S and -W during week 48 2007. During week 47 2007, a sentinel hospital in HSE-E reported a significant increase in respiratory admissions (data for this hospital are not currently available for week 48 2007). Increased absenteeism was reported in sentinel primary schools in HSE-M and HSE-MW and in sentinel secondary schools in HSE-M, -MW and -NW during week 48 2007. A sentinel secondary school in HSE-MW reported a slight increase in absenteeism in week 48 2007 due to 'colds'. During week 48 2007, sporadic influenza activity was reported in seven HSE-Areas: HSE-E, -MW, -NE, -NW, -SE, -S and -W. No influenza activity was reported in HSE-M during week 48 2007 (figure 6).



**Figure 6:** Map of influenza activity by HSE-Health Area during week 48 2007

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

During week 49 2007, five cases of clinical influenza and 29 ILI cases were reported in Northern Ireland, corresponding to a combined rate of 25.1 per 100,000 population, a slight increase from the updated rate of 21.6 per 100,000 for week 48 2007. Eighty-one non-sentinel and three sentinel specimens were tested during week 49 2007, all were negative for influenza. <http://www.cdsceni.org.uk>

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

During weeks 48 and 49 2007, clinical influenza activity remained low and below baseline thresholds in the UK, increasing in England and remaining stable in Wales and Scotland. Of the samples referred to the Centre for Infections' Respiratory Virus Unit, twenty six tested positive for influenza A (H1), three for influenza A (H3), two for influenza B and three for RSV during these weeks.

<http://www.hpa.org.uk/infections/topics%5Faz/influenza/seasonal/flureports0708.htm>

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

Levels of influenza activity remain low in Europe, at levels normally observed outside the seasonal influenza peak period. A total of 29 countries reported no or only sporadic influenza activity in week 48 2007. In recent weeks

there has been an increase in clinical influenza activity observed in Spain which has been validated by an increase in laboratory confirmed cases of influenza virus. However, clinical influenza activity in Spain still remains below the national baseline threshold. There are currently 50-65 influenza virus detections per week in Europe, which remains low, compared to previous seasons, but is gradually increasing. The total number of respiratory specimens collected by sentinel physicians in week 48 2007 was 472, of which 31 (6.6%) were positive: 7 A (unsubtyped), 11 A (H1), 8 A (H1N1) and 5 B. In addition, 21 influenza virus detections (11 A unsubtyped, 1 A H1 and 9 B) were reported from non-sentinel sources. To date this season, 240 positive influenza specimens have been reported from 21 countries across Europe: 80 A (unsubtyped), 67 A (H1), 14 A (H3) and 79 B. Based on antigenic and/or genetic characterisation of 35 influenza viruses, 28 were A/Solomon Island/3/2006 (H1N1)-like, six were B/Florida/4/2006-like (B/Yamagata/16/88 lineage) and one was B/Malaysia/2506/2004-like (B/Victoria/2/87 lineage). At present, it is still too early to say which influenza virus type/subtype will emerge as the dominant virus in Europe. Whilst influenza activity in Europe is currently low, reports of RSV are currently increasing in Europe, particularly in England, Scotland, the Netherlands and Sweden. <http://www.eiss.org/index.cgi>

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

During week 48 2007, influenza activity levels remained low in Canada with the majority of regions across the country reporting no activity. Twenty regions reported sporadic influenza activity and only one region reported localised activity. The ILI consultation rate increased to 16 per 1,000 patient visits however is still within the expected rate for this week. In week 48 2007, 10 (0.6%) of the 1,789 specimens tested were positive for influenza virus. Of the influenza detections to date, 77% (40/52) were influenza A and 23% (12/52) were influenza B. Based on antigenic characterisation of 16 viruses, five were A/Solomon Islands/3/2006 (H1N1)-like, four were A/Wisconsin/67/2005 (H3N2)-like, one was A/Brisbane/10/2007 (H3N2)-like, one was B/Malaysia/2506/2004-like and four were B/Florida/4/2006-like. <http://www.phac-aspc.gc.ca/fluwatch/index.html>

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

During week 48 2007, a low level of influenza activity was reported in the United States. Four states reported localised influenza activity; 33 states and the District of Columbia reported sporadic influenza activity; and 13 states reported no influenza activity. The proportion of outpatient visits for ILI and acute respiratory illness was below national and region-specific baseline levels. During week 48 2007, WHO and NREVSS laboratories reported 2,504 specimens tested for influenza viruses, 85 (3.4%) of which were positive: 30 A (H1), 2 A (H3), 45 A (unsubtyped) and 8 B. The proportion of deaths attributed to pneumonia and influenza was below the epidemic threshold. It is too early in the influenza season to determine which influenza viruses will predominate in the United States or how well the vaccine and circulating strains will match. <http://www.cdc.gov/flu/weekly/fluactivity.htm>

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

During week 48 2007, sporadic influenza activity was reported in China (4 A unsubtyped, 3 A H3 and 46 B), Madagascar (4 A H1 and 1 B) and Mongolia and no influenza activity was reported in Sri-Lanka. Five influenza A (H1) and one influenza B virus detections were reported from Iran and 26 A (H1) virus detections from Japan during week 48 2007. <http://gamapserver.who.int/GlobalAtlas/home.asp>

### ***Avian Influenza***

As of December 12<sup>th</sup> 2007, 338 confirmed human cases and 208 (61.5%) deaths from avian influenza A (H5N1) have been reported to the WHO from Azerbaijan, Cambodia, China, Djibouti, Egypt, Indonesia, Iraq, Lao Peoples Democratic Republic, Nigeria, Thailand, Turkey and Viet Nam. The Ministry of Health of Indonesia has announced a new case of human infection of H5N1 avian influenza. A 28 year old female from Tangerang City, Banten Province developed symptoms on December 1<sup>st</sup> and died in an AI referral hospital on December 10<sup>th</sup> 2007. The case worked as a road side seller of decorative plants. Poultry and poultry cages were located in the vicinity of her business. Investigations are ongoing into the source of her infection. Of the 114 cases confirmed to date in Indonesia, 92 have been fatal.

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/>

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

### ***Northern Hemisphere Influenza Vaccine for the 2007/2008 Season***

The members of the WHO Collaborating Centres on Influenza have recommended that influenza vaccines for the 2007/2008 influenza season in the Northern Hemisphere contain the following strains:

- an A/Solomon Islands/3/2006 (H1N1)-like virus
- an A/Wisconsin/67/2005 (H3N2)-like virus<sup>a</sup>
- a B/Malaysia/2506/2004-like virus

Candidate vaccine viruses include:

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

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

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

#### **Acknowledgements**

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**This report was produced by Dr. Lisa Domegan and Dr. Joan O'Donnell, HPSC**