

# 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 48 2007 (26<sup>th</sup> November – 2<sup>nd</sup> December 2007)

## Summary

During week 48 2007, influenza activity was at low levels in Ireland. Influenza-like illness (ILI) consultation rates increased during week 48 2007, but remain within expected levels for the time of year. No positive influenza specimens were detected by the NVRL during week 48 2007. Respiratory syncytial virus (RSV) detections decreased during week 48 2007, however remain at higher levels than previously recorded for this time of year.

## 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

Twenty-two ILI cases were reported from sentinel GPs during week 48 2007, corresponding to an ILI consultation rate of 14.3 per 100,000 population, an increase from the updated rate of 5.2 per 100,000 in week 47 2007 (figure 1). Forty-two of 50 (84.0%) sentinel general practices reported during week 48 2007, with 13 reporting ILI cases.

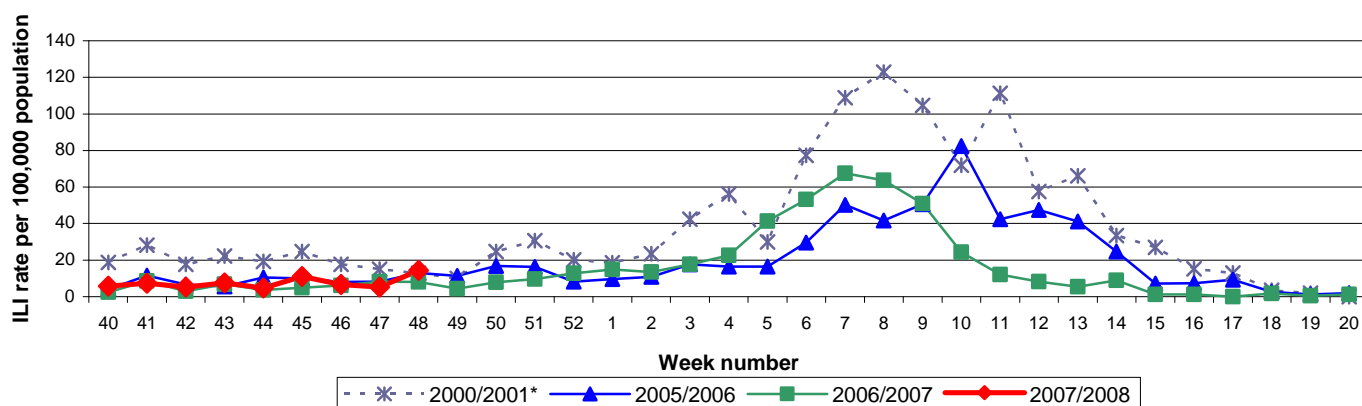
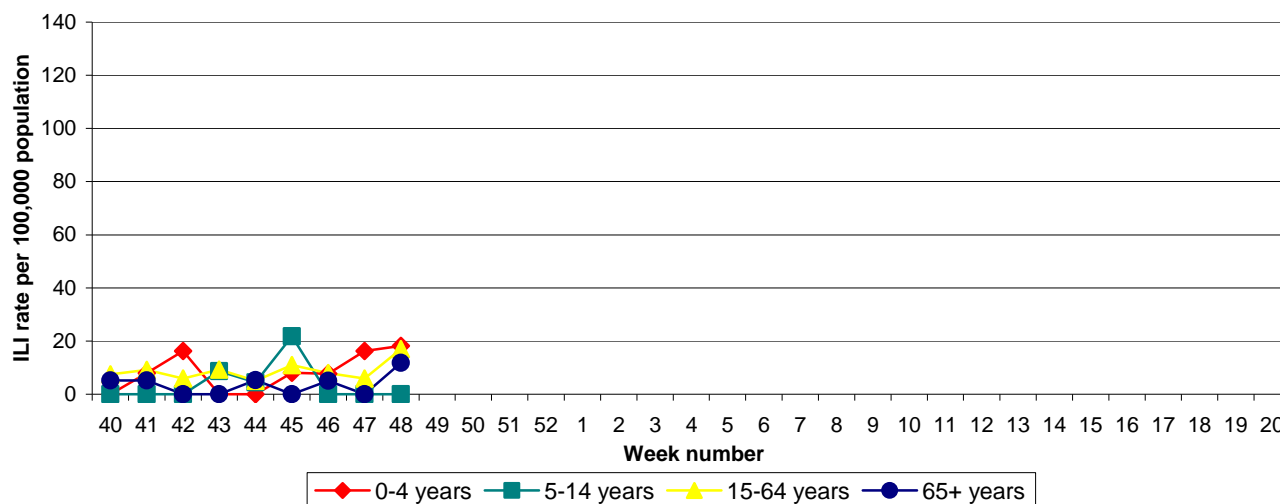


Figure 1: GP consultation rate for ILI per 100,000 population by week, during the 2000/2001\*, 2005/2006, 2006/2007 & 2007/2008 influenza seasons \*Highest recorded levels of ILI activity since initiation of sentinel surveillance

## Results (continued)

During week 48 2007, two ILI cases were reported in the 0-4 year age group (18.2 per 100,000 population), 18 ILI cases were reported in the 15-64 year age group (17.0 per 100,000 population) and two ILI cases were reported in those aged 65 years or older (11.8 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 eight specimens taken by sentinel GPs during week 48 2007, all of which were negative for influenza virus. The NVRL also tested 99 non-sentinel specimens taken during week 48 2007, mainly from hospitalised paediatric cases. All non-sentinel specimens were negative for influenza virus and 45 (45.5%) were positive for respiratory syncytial virus (RSV) (table 1). To date this season, only one specimen (from sentinel sources) has tested positive for influenza virus, influenza A (H3). NVRL detections of RSV from non-sentinel sources decreased slightly during week 48 2007, however remain at higher levels than previously recorded for this time of year (figure 4). To date this season, the NVRL has detected the following positive specimens from non-sentinel sources: 207 RSV, 2 Adenovirus, 2 parainfluenza virus (PIV) type-1, 1 PIV-2 and 4 PIV-3.

Influenza positive specimens by HSE-Area and age group (in years) for week 48 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 48 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>48 2007</b>	Sentinel	8	0	0.0	0	0	NA	NA
	Non-Sentinel	99	0	0.0	0	0	45	45.5
	<b>Total</b>	<b>107</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>42.1</b>
<b>Season to date</b>	Sentinel	58	1	1.7	1	0	NA	NA
	Non-Sentinel	605	0	0.0	0	0	207	34.2
	<b>Total</b>	<b>663</b>	<b>1</b>	<b>0.2</b>	<b>1</b>	<b>0</b>	<b>207</b>	<b>31.2</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

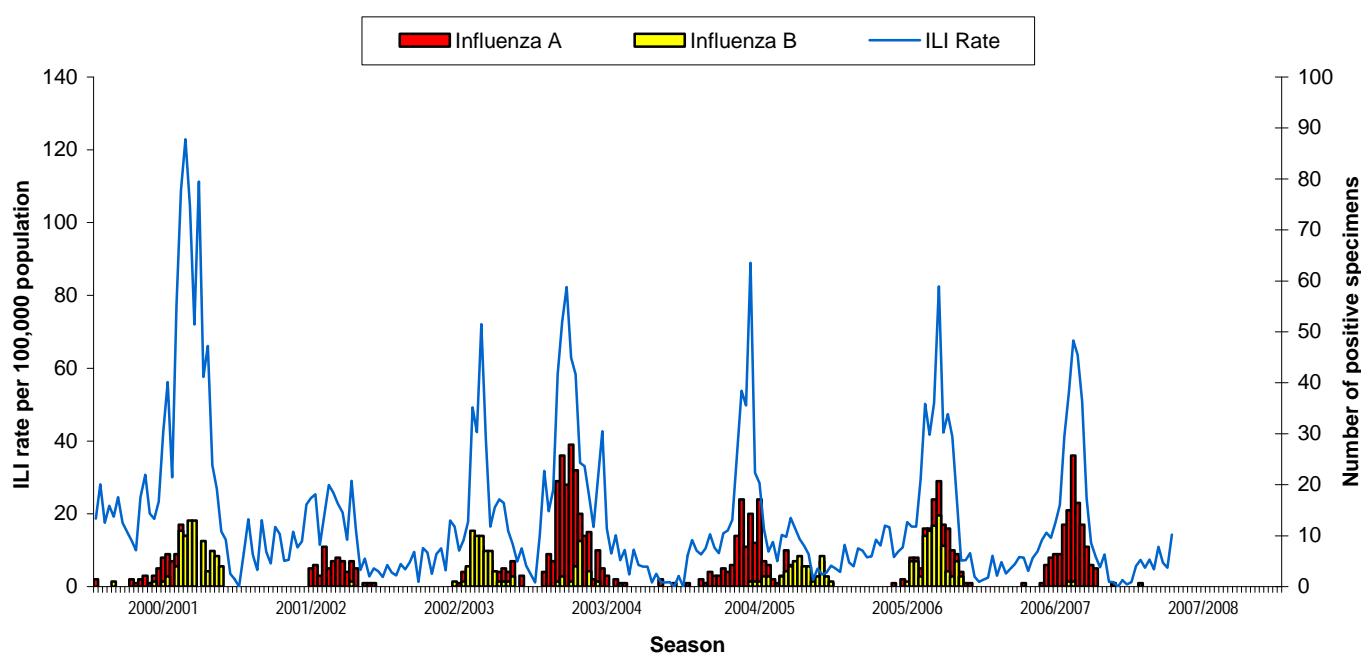
**Table 2:** Total number of sentinel and non-sentinel\* influenza A and B positive specimens by HSE-Area for week 48 2007 and the 2007/2008 season to date

	Week 48 2007			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
HSE-ER	0	0	0	0	0	0
HSE-M	0	0	0	0	0	0
HSE-MW	0	0	0	0	0	0
HSE-NE	0	0	0	0	0	0
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>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>

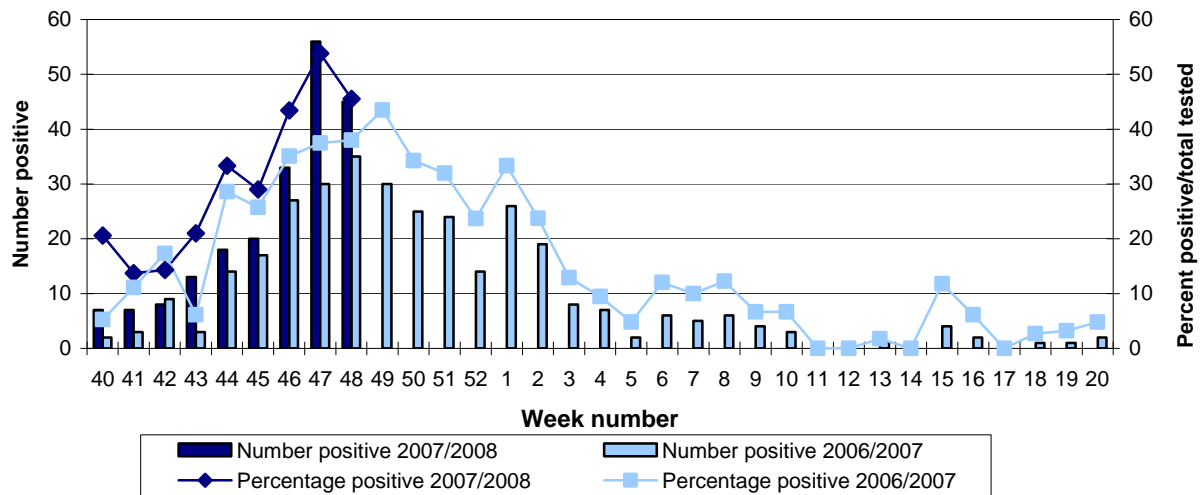
\* Please note that non-sentinel specimens include all specimens referred to the NVRL, these specimens are mainly from hospitals and some GPs and may include more than one specimen from each case

**Table 3:** Total number of sentinel and non-sentinel\* influenza A and B positive specimens by age group (in years) for week 48 2007 and the 2007/2008 season to date

	Week 48 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	0	0	0	1	0	1
65 years and older	0	0	0	0	0	0
Age group unknown	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>



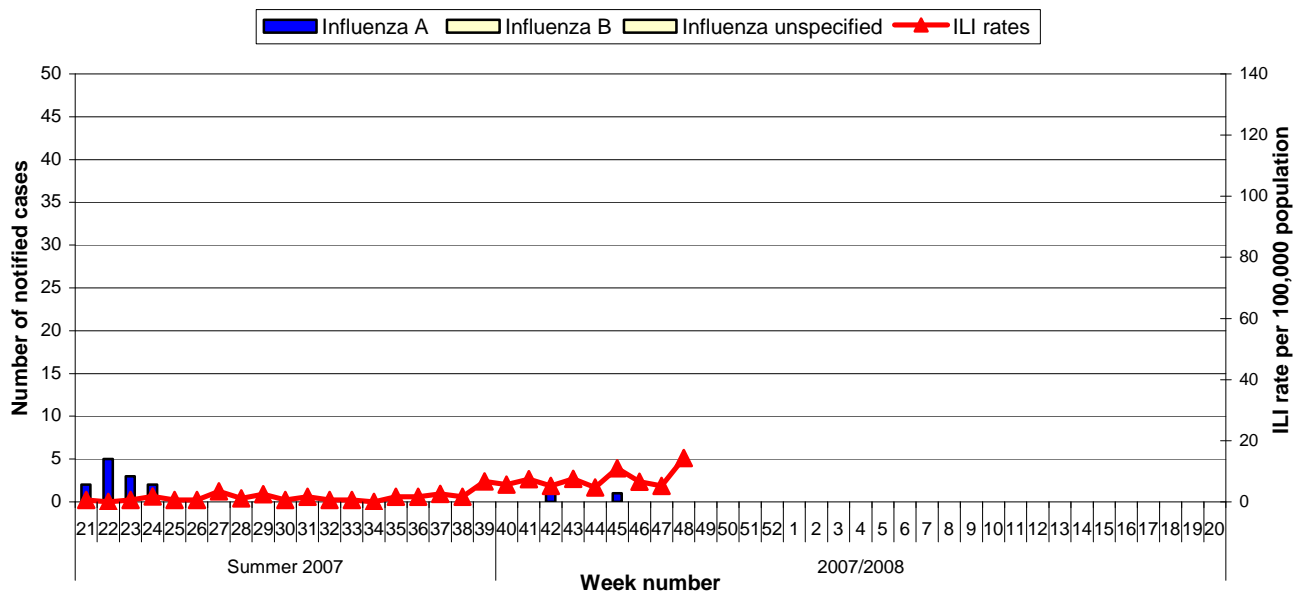
**Figure 3:** GP ILI consultation rate per 100,000 population and the number of positive influenza specimens detected by the NVRL by week and season, 2000/2001 - 2007/2008



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

### Weekly Influenza Notifications

No influenza cases were notified to HPSC during week 47 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 05/12/2007 at 12:05

### Mortality Data

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

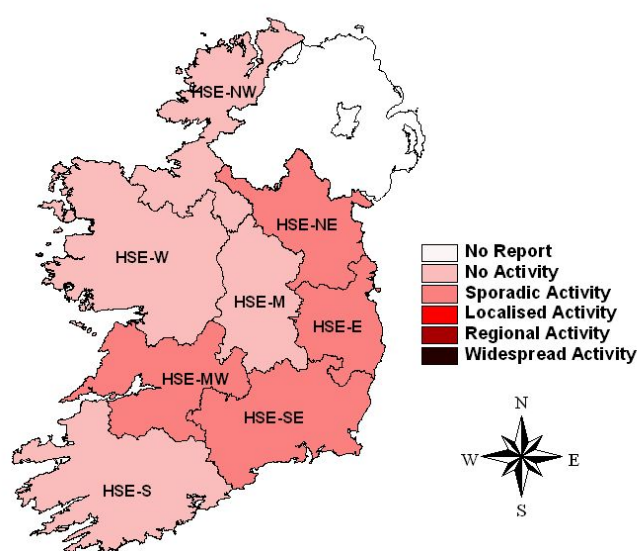
### Outbreak Reports

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 sentinel hospitals in HSE-E and -NW during week 47 2007 and in HSE-M and -S during week 48 2007. Increased absenteeism was reported in sentinel primary schools in HSE-SE (during week 47 2007) and in HSE-M (during week 48 2007). During week 47 2007, sporadic influenza activity (based on isolated cases of ILI) was reported in four HSE-Areas: HSE-E, -MW -NE and -SE. No influenza activity was reported in HSE-M, -NW, -S and -W during week 47 2007 (figure 6).



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

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

During week 48 2007, one case of clinical influenza and 32 ILI cases were reported in Northern Ireland, corresponding to a combined rate of 21.6 per 100,000 population, a slight decrease from the updated rate of 37.3 per 100,000 for week 47 2007. Forty-four non-sentinel and three sentinel specimens were tested during week 48 2007, all were negative for influenza. <http://www.cdscni.org.uk>

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

Influenza activity remained low and below baseline threshold levels across the United Kingdom during weeks 47 and 48 2007. Clinical indicators of influenza activity have remained stable in England, at 12.0 per 100,000 population in week 47 2007 and 13.2 per 100,000 in week 48 2007, and Wales, at 1.4 per 100,000 in week 47 2007 and 1.0 per 100,000 in week 48 2007. The consultation rate in Scotland decreased from 22 per 100,000 in week 47 2007 to 14 per 100,000 in week 48 2007. Detections of influenza A and B from NHS and HPA laboratories are beginning to increase. Laboratory confirmed infections of RSV are increasing and are at higher levels than those recorded last season. Of the specimens sent to the Respiratory Virus Unit at the Centre for Infections during week 48 2007, three were positive for RSV, nine for influenza A (H1) and two for influenza B. Since week 40 2007, twenty eight influenza viruses have been isolated: 23 A (H1) and 5 B.

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

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

In Europe, levels of influenza activity remained low at levels normally observed outside the seasonal influenza peak, with 28 countries reporting no or only sporadic influenza activity during week 47 2007. An increase in levels of ILI was reported for Spain in week 47, corresponding to an increase in laboratory confirmed cases, but activity levels still remain below baseline. The total number of respiratory specimens collected by sentinel physicians in week 47 2007 was 375, of which 20 (5.3%) were influenza virus positive: 11 A (unsubtyped), 3 A (H1), 1 A (H1N1), 1 A (H3N2) and 4 B. In addition, 25 influenza virus detections (13 A (unsubtyped), 5 A (H1), 1 A (H3N2) and 6 B) were reported from non-sentinel sources. To date this season, only sporadic laboratory confirmed cases of influenza have been reported across Europe. Of the total number of isolates (n=168), 35% were influenza A (unsubtyped), 25% were influenza A (H1), 8% were influenza A (H3) and 32% were influenza B. No particular influenza type or subtype has yet emerged as the dominant virus for Europe. Based on the antigenic and/or genetic characterisation of 21 influenza viruses, 16 were A/Solomon Island/3/2006 (H1N1)-like, four were B/Florida/4/2006-like (B/Yamagata/16/88 lineage), and one was B/Malaysia/2506/2004-like (B/Victoria/2/87 lineage). <http://www.eiss.org/index.cgi>

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

During week 47 2007, influenza activity levels remained low in Canada with the majority of regions across the country reporting no activity. The number of regions reporting sporadic influenza activity increased from nine regions in week 46 2007 to 22 regions in week 47 2007. Localised activity was reported in two regions (in central Alberta and Toronto). The ILI consultation rate remains low at 6 per 1,000 patient visits during week 47 2007. In week 47 2007, 13 (0.8%) of the 1,710 specimens tested were positive for influenza virus. Of the influenza detections to date, 78% (31/40) were influenza A and 22% (9/40) were influenza B. Based on antigenic characterisation of nine viruses, one was A/Solomon Islands/3/2006 (H1N1)-like, three were A/Wisconsin/67/2005 (H3N2)-like, one was A/Brisbane/10/2007 (H3N2)-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 47 2007, a low level of influenza activity was reported in the United States. Four states reported localised influenza activity; 24 states and the District of Columbia reported sporadic influenza activity; and 22 states reported no influenza activity. The proportion of outpatient visits for ILI and acute respiratory illness (ARI) was below national and region-specific baseline levels. During week 47 2007, WHO and NREVSS laboratories reported 1,767 specimens tested for influenza viruses, 36 (2.0%) of which were positive: 28 A (unsubtyped), 3 A (H1) and 5 B. CDC has antigenically characterised six influenza viruses this season, three A/Brisbane/10/2007 (H3N2)-like and three B/Yamagata/16/88-like. The proportion of deaths attributed to pneumonia and influenza was below the epidemic threshold. <http://www.cdc.gov/flu/weekly/fluactivity.htm>

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

During week 47 2007, sporadic influenza activity was reported in Argentina (1 B), Brazil (1 B), China (6 A H1, 6 A H3, 3 A unsubtyped and 43 B), Mongolia, Thailand (5 B) and Tunisia. Four influenza A (unsubtyped) virus detections were reported from Iran, 6 A (H1) from Japan and 3 A (H1) from Madagascar during week 47 2007. <http://gamapserver.who.int/GlobalAtlas/home.asp>

### ***Avian Influenza***

As of November 12<sup>th</sup> 2007, 336 confirmed human cases and 207 (61.6%) 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 in China have reported a new case of human infection with A (H5N1). The 24-year old male from Jiangsu Province, developed symptoms on November 24<sup>th</sup> and died on December 2<sup>nd</sup> 2007. There is no initial indication to suggest he had contact with sick birds prior to becoming unwell. Close contacts have been placed under medical observation and all remain well. Of the 26 cases confirmed to date in China, 17 have been fatal.

On November 21<sup>st</sup> 2007, the Department for the Environment Food and Rural Affairs (Defra) in England decided, as part of its epidemiological investigation into the outbreak of H5N1 avian influenza on a poultry farm in Suffolk, that a fifth premises in the surveillance zone should be declared as a Dangerous Contact. All poultry on these premises will be culled as a precautionary measure.

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**