

# 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 45 2007 (5<sup>th</sup> – 11<sup>th</sup> November 2007)**

## Summary

During week 45 2007, influenza activity was at low levels in Ireland, as expected for the time of year. Thirteen influenza-like illness (ILI) cases were reported by sentinel GPs during this period. No positive influenza specimens were detected by the NVRL during week 45 2007.

## Background

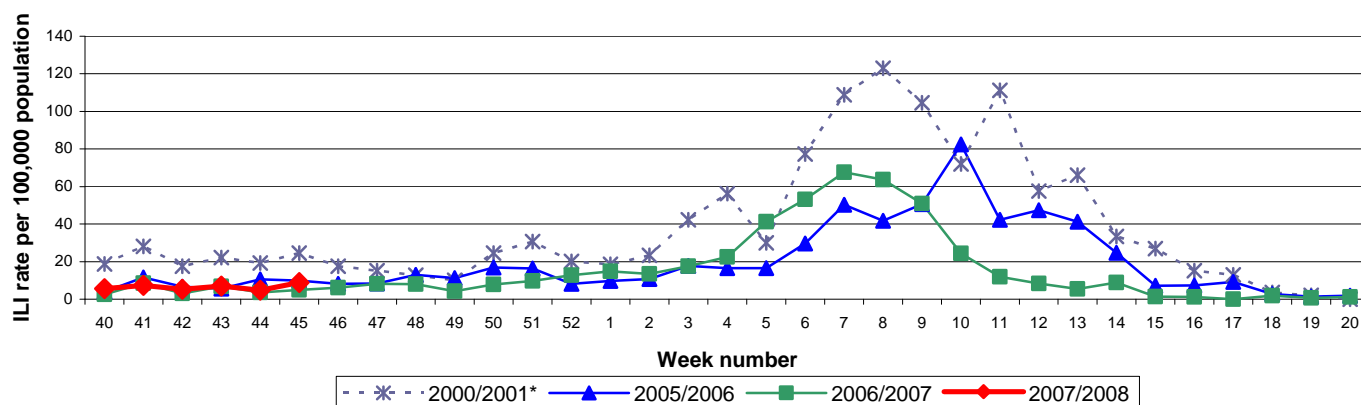
This is the eighth season of influenza surveillance using computerised sentinel general practices in Ireland. The Health Protection Surveillance Centre (HPSC) is working in collaboration with the Irish College of General Practitioners (ICGP), the National Virus Reference Laboratory (NVRL) and the Departments of Public Health on this sentinel surveillance project. Forty-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°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

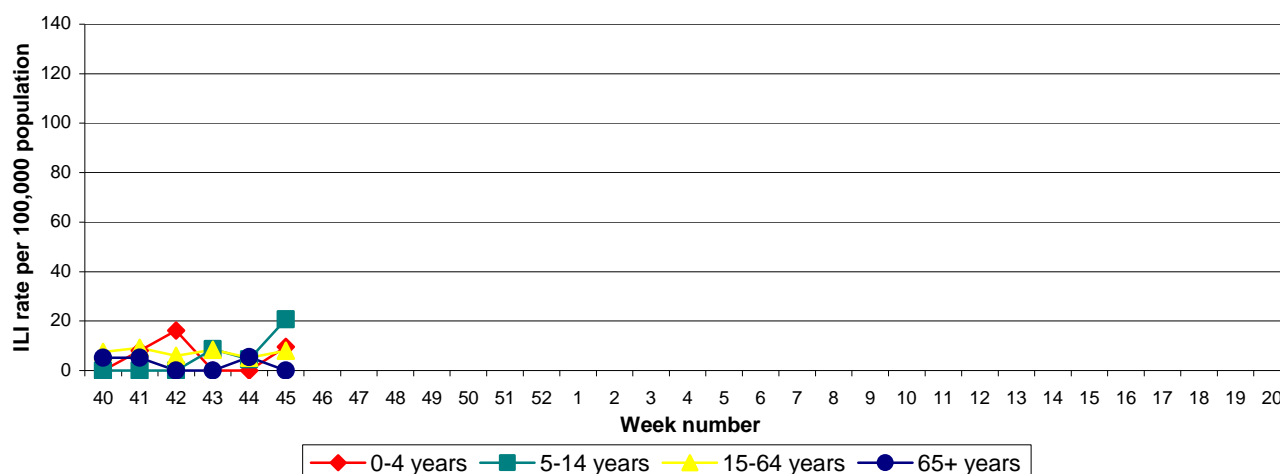
Thirteen ILI cases were reported from sentinel GPs during week 45 2007, corresponding to an ILI consultation rate of 8.9 per 100,000 population, an increase from the updated rate of 4.8 per 100,000 in week 44 2007 (figure 1). Thirty-nine of 49 (79.6%) sentinel general practices reported during week 45 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 45 2007, one ILI case was reported in the 0-4 year age group (9.6 per 100,000 population), four ILI cases were reported in the 5-14 year age group (20.7 per 100,000 population) and eight ILI cases were reported in the 15-64 year age group (8.0 per 100,000 population), as shown in figure 2. No ILI cases were reported in those aged 65 years older.



**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 ten specimens taken by sentinel GPs during week 45 2007, all of which were negative for influenza virus. The NVRL also tested 74 non-sentinel specimens taken during week 45 2007, mainly from hospitalised paediatric cases. All non-sentinel specimens were negative for influenza virus and 19 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 remain at similar levels to the 2006/2007 season.

Influenza positive specimens by HSE-Area and age group (in years) for week 44 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 45 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>45 2007</b>	Sentinel	10	0	0.0	0	0	NA	NA
	Non-Sentinel	74	0	0.0	0	0	19	25.7
	<b>Total</b>	<b>84</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>22.6</b>
<b>Season to date</b>	Sentinel	36	1	2.8	1	0	NA	NA
	Non-Sentinel	333	0	0.0	0	0	74	22.2
	<b>Total</b>	<b>369</b>	<b>1</b>	<b>0.3</b>	<b>1</b>	<b>0</b>	<b>74</b>	<b>20.1</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

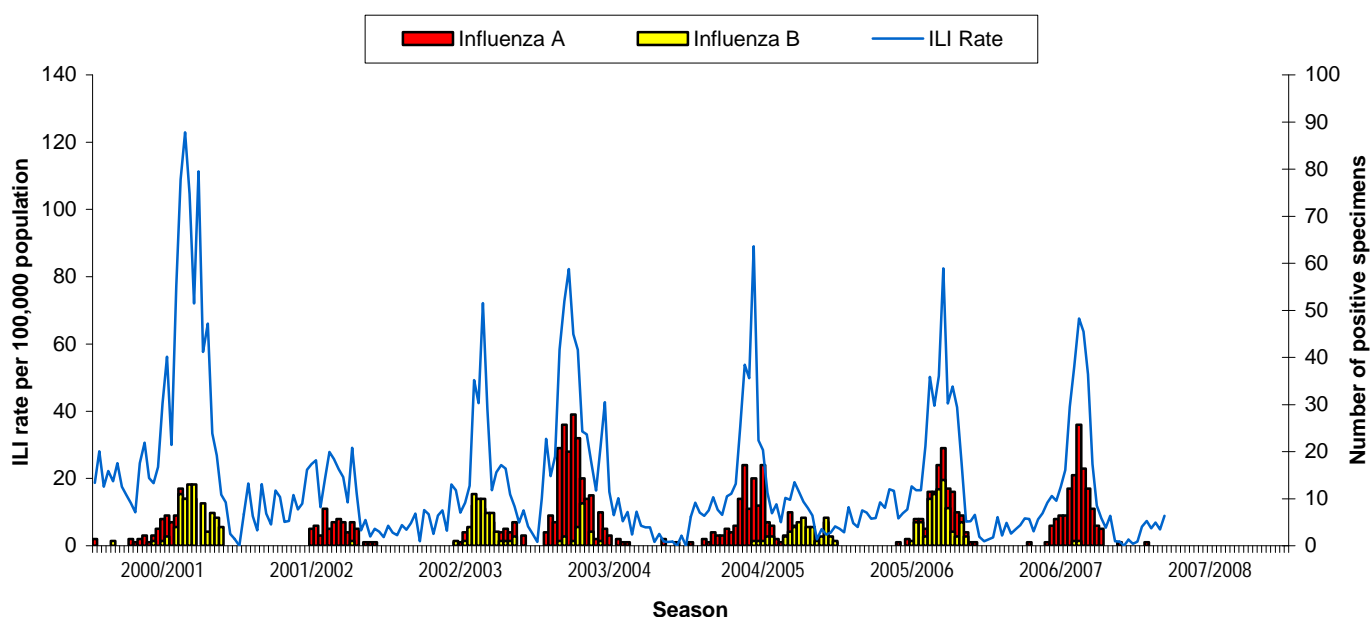
**Table 2:** Total number of sentinel and non-sentinel\* influenza A and B positive specimens by HSE-Area for week 45 2007 and the 2007/2008 season to date

	Week 45 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>

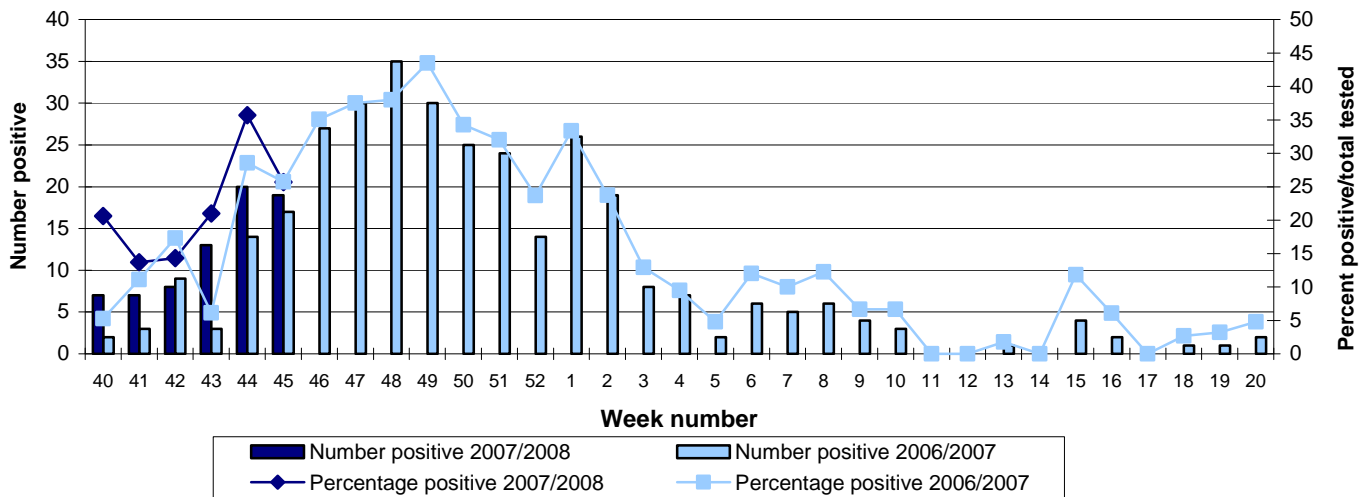
\* Please note that non-sentinel specimens include all specimens referred to the NVRL, these specimens are mainly from hospitals and some GPs and may include more than one specimen from each case

**Table 3:** Total number of sentinel and non-sentinel\* influenza A and B positive specimens by age group (in years) for week 45 2007 and the 2007/2008 season to date

	Week 45 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>



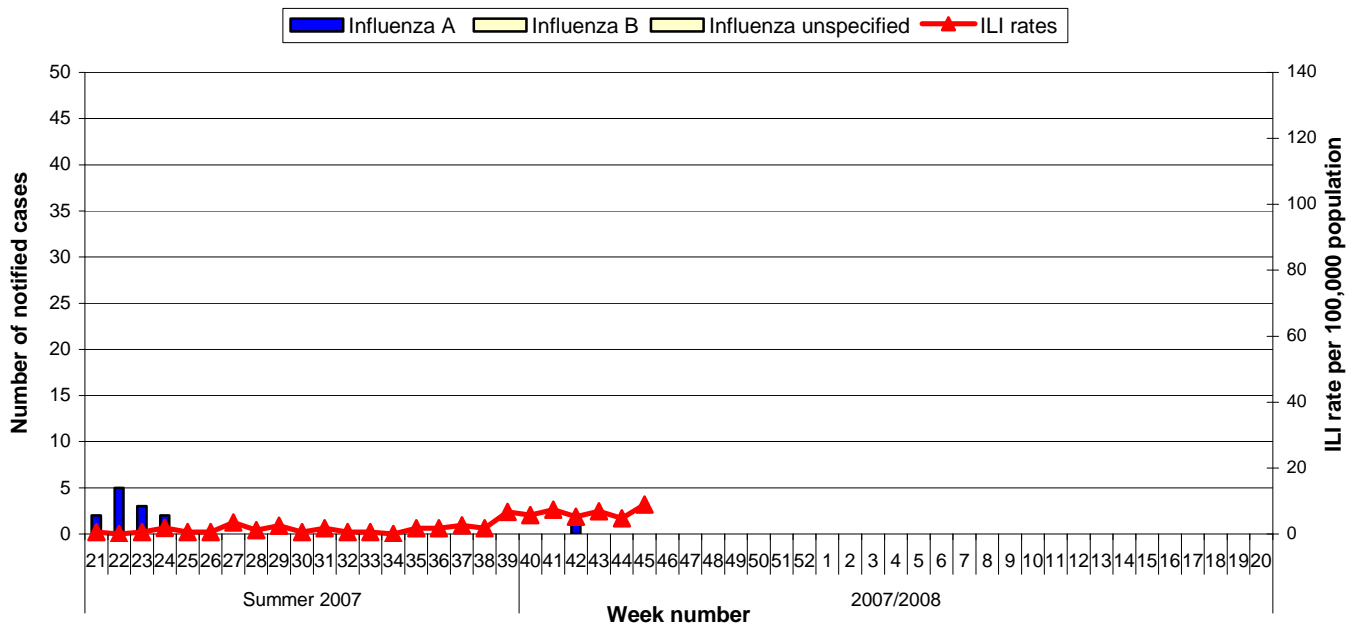
**Figure 3:** GP ILI consultation rate per 100,000 population and the number of positive influenza specimens detected by the NVRL by week and season, 2000/2001 - 2007/2008



**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 weeks 44 2007. A possible influenza case (type unspecified) reported from HSE-E in week 44 2007 has been denotified. 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 14/11/2007 at 14:30

**Mortality Data**

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

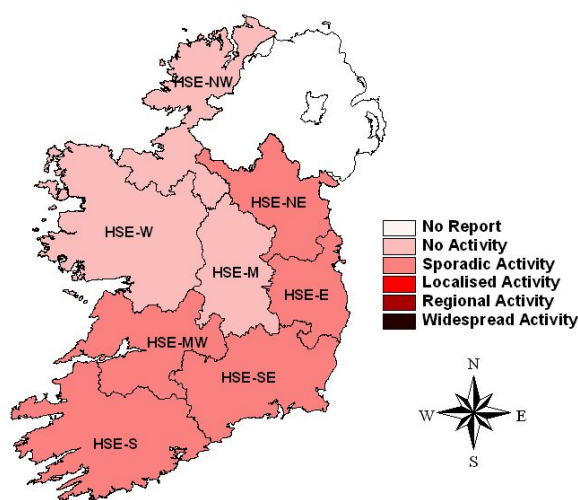
**Outbreak Reports**

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 a sentinel hospital in HSE-S during week 45 2007. No significant increases in school absenteeism were reported from sentinel schools during week 44 2007. During week 44 2007, sporadic influenza activity (based on isolated cases of ILI) was reported in five HSE-Areas: HSE-E, -MW, -NE, -SE and -S. No influenza activity was reported in HSE-M, -NW and -W during week 44 2007 (figure 6).



**Figure 6:** Map of influenza activity by HSE-Health Area during week 44 2007

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

During week 45 2007, 30 cases of clinical influenza and 22 ILI cases were reported in Northern Ireland, corresponding to a combined rate of 36.9 per 100,000 population, a significant increase from the updated rate of 17.9 per 100,000 for week 44 2007. Thirty-four non-sentinel and four sentinel specimens were tested during week 45 2007, none of which were positive for influenza virus. <http://www.cdscni.org.uk>

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

During weeks 44 and 45 2007, clinical influenza activity remained low, decreasing slightly in England, increased in Scotland and remained stable in Wales. Activity remained below baseline threshold levels. Two samples referred to the Centre for Infections' Respiratory Virus Unit tested positive for influenza A(H1) in week 44 2007. <http://www.hpa.org.uk/infections/topics%5Faz/influenza/seasonal/flureports0708.htm>

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

Influenza activity in Europe remains low which is typical for this time of year. Sporadic influenza activity was reported in England, France and Scotland during week 44 2007; the remaining 25 countries that reported to the European Influenza Surveillance Scheme (EISS) reported no activity. The total number of respiratory specimens collected by sentinel physicians in week 44 2007 was 239, two (0.8%) of which were positive (both influenza B viruses; reported by Poland). In addition, six influenza virus detections were reported from non-sentinel sources in the following countries: England (2 AH1), Scotland (1 A untyped and 1 B), Sweden (1 A untyped) and Switzerland (1 A untyped). To date this season, only sporadic laboratory confirmed influenza cases have been reported in Europe. No influenza type has yet emerged as the dominant virus this season. Based on the antigenic

and/or genetic characterisation of four influenza viruses, six were A/Solomon Island/3/2006 (H1N1)-like and one was B/Florida/4/2006-like (B/Yamagata/16/88 lineage). <http://www.eiss.org/index.cgi>

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

During week 44 2007, influenza activity levels remained low in Canada. Sporadic influenza activity was reported in a four regions and localised activity was reported in Ontario. The ILI consultation rate (7 per 1,000 patient visits) was similar to week 43 2007 and is below the expected range. In week 44 2007, two (0.15%) of the 1,296 specimens tested were positive for influenza virus. Of the influenza detections to date, 89% (17/19) were influenza A and 11% (2/19) were influenza B. Based on antigenic characterisation of six viruses, two were antigenically similar to A/Wisconsin/67/2005 (H3N2), one had reduced titre to A/Wisconsin/67/2005, one was antigenically similar to A/Brisbane/10/2007 (H3N2) and two were antigenically similar to B/Florida/4/2006, belonging to the B/Yamagata lineage. <http://www.phac-aspc.gc.ca/fluwatch/index.html>

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

During week 44 2007, a low level of influenza activity was reported in the United States. Two states reported localised influenza activity; 17 states, the District of Columbia, and Puerto Rico reported sporadic influenza activity; and 31 states reported no influenza activity. The proportion of outpatient visits for ILI and acute respiratory illness was below national baseline levels. During week 44 2007, 50 (2.5%) specimens were positive for influenza: 4 A H1, 45 A (unsubtyped) and one B.

Swine influenza A (H1N2) virus was detected in a child from Michigan during week 44 2007. The child attended an agricultural event where swine were exhibited, but had no direct contact with pigs. Although human infection with swine influenza is uncommon, sporadic cases can occur, usually among persons in direct contact with ill pigs or who have been in places where pigs might have been present. The sporadic cases identified in recent years have not resulted in sustained human-to-human transmission or community outbreaks.

<http://www.cdc.gov/flu/weekly/fluactivity.htm>

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

During week 44 2007, sporadic influenza activity was reported in China (2 A H1, 4 A H3, 2 A unsubtyped and 28 B), Madagascar (9 A H1 and 1 B), Sri-Lanka (1 A unsubtyped) and Tunisia (1 A H3). No influenza activity was reported in Mongolia. Two influenza A (H1) and one influenza A (H3) virus detections were reported from Japan during week 44 2007. <http://gamapserver.who.int/GlobalAtlas/home.asp>

### ***Avian Influenza***

As of the 12<sup>th</sup> of November 2007, 335 confirmed human cases and 206 (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.

In England, the Department for the Environment Food and Rural Affairs (Defra) has confirmed H5N1 avian influenza on a poultry farm near Diss, on the Norfolk/Suffolk border. The affected premises were put under restriction on the 12<sup>th</sup> of November 2007 and Defra has commenced a cull of the 6,500 remaining poultry on the infected premises and imposed a 3-kilometre protection zone and a 10-kilometre outer surveillance zone around the farm area. Following initial epidemiological work and veterinary assessment by Defra, four further premises have been identified as Dangerous Contacts. As a precautionary measure, there will now be culls on four further sites in the region that have links with the index farm to prevent possible further spread of the disease. The risk of workers being infected by the virus is very low but any possibility of exposure to the virus is taken very seriously. Twenty-three workers have been identified and contacted and have been offered preventative treatment with antiviral medication, 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**