

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 46 2007 (12th – 18th November 2007)

Summary

During week 46 2007, influenza activity was at low levels in Ireland, as expected for the time of year. Eleven influenza-like illness (ILI) cases were reported by sentinel GPs during this period. No positive influenza specimens were detected by the NVRL during week 46 2007. Respiratory syncytial virus (RSV) detections for the month of October and to date for November are 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

Eleven ILI cases were reported from sentinel GPs during week 46 2007, corresponding to an ILI consultation rate of 6.5 per 100,000 population, a decrease from the updated rate of 11.1 per 100,000 in week 45 2007 (figure 1). Forty-six of 50 (92.0%) sentinel general practices reported during week 46 2007, with eleven reporting ILI cases.

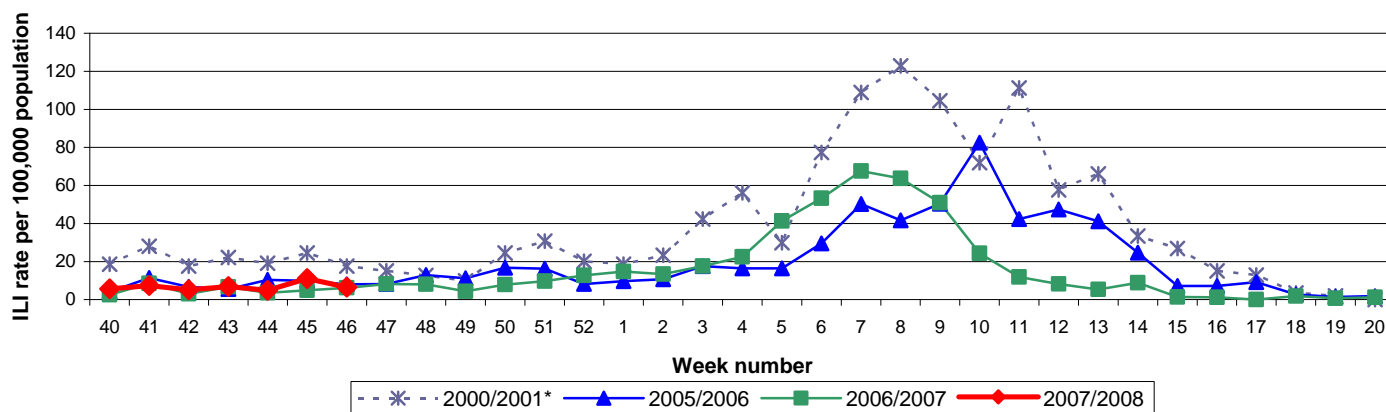


Figure 1: GP consultation rate for ILI per 100,000 population by week, during the 2000/2001*, 2005/2006, 2006/2007 & 2007/2008 influenza seasons *Highest recorded levels of ILI activity since initiation of sentinel surveillance

Results (continued)

During week 46 2007, one ILI case was reported in the 0-4 year age group (8.2 per 100,000 population), nine ILI cases were reported in the 15-64 year age group (7.7 per 100,000 population) and one ILI case was reported in those aged 65 years or older (5.3 per 100,000 population), as shown in figure 2. No ILI cases were reported in those aged 5-14 years.

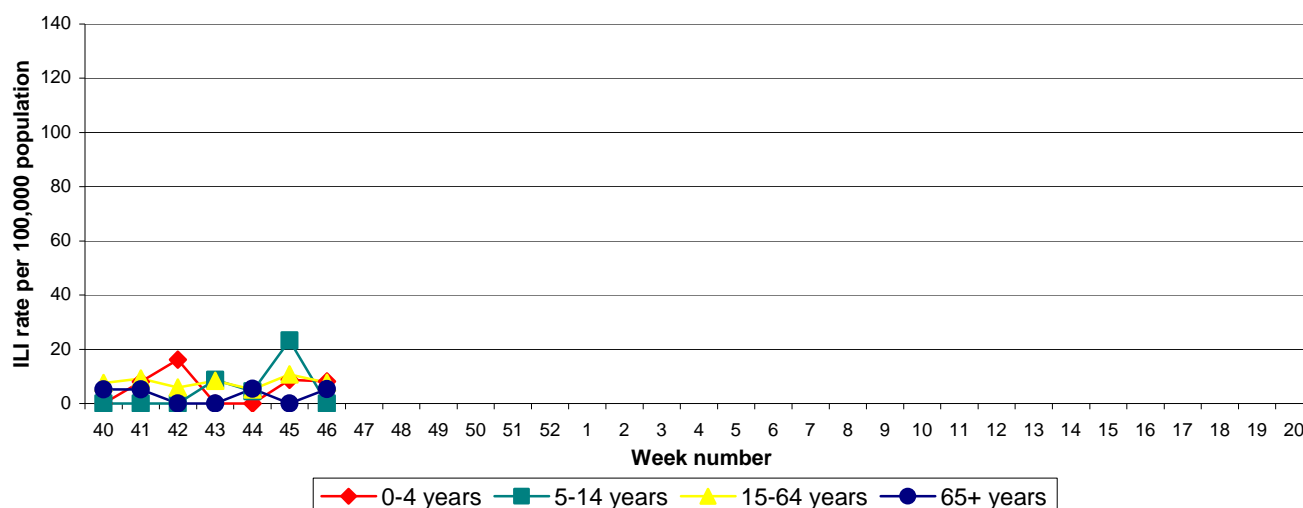


Figure 2: Age specific GP consultation rate* for ILI per 100,000 population by week during the 2007/2008 influenza season
*Please note the denominator used in the age specific consultation rate is from the 2006 census data; this assumes that the age distribution of the sentinel general practices is similar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

Virological Data from the NVRL

The NVRL tested seven specimens taken by sentinel GPs during week 46 2007, all of which were negative for influenza virus. The NVRL also tested 71 non-sentinel specimens taken during week 46 2007, mainly from hospitalised paediatric cases. All non-sentinel specimens were negative for influenza virus and 33 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 increased significantly during week 46 2007. RSV detections for the month of October and to date for November are at higher levels than previously recorded for this time of year (figure 4).

Influenza positive specimens by HSE-Area and age group (in years) for week 46 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 46 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
46 2007	Sentinel	7	0	0.0	0	0	NA	NA
	Non-Sentinel	71	0	0.0	0	0	33	46.5
	Total	78	0	0.0	0	0	33	42.3
Season to date	Sentinel	43	1	2.3	1	0	NA	NA
	Non-Sentinel	403	0	0.0	0	0	111	27.5
	Total	446	1	0.2	1	0	111	24.9

*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 46 2007 and the 2007/2008 season to date

	Week 46 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
Total	0	0	0	1	0	1

* 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 46 2007 and the 2007/2008 season to date

	Week 46 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
Total	0	0	0	1	0	1

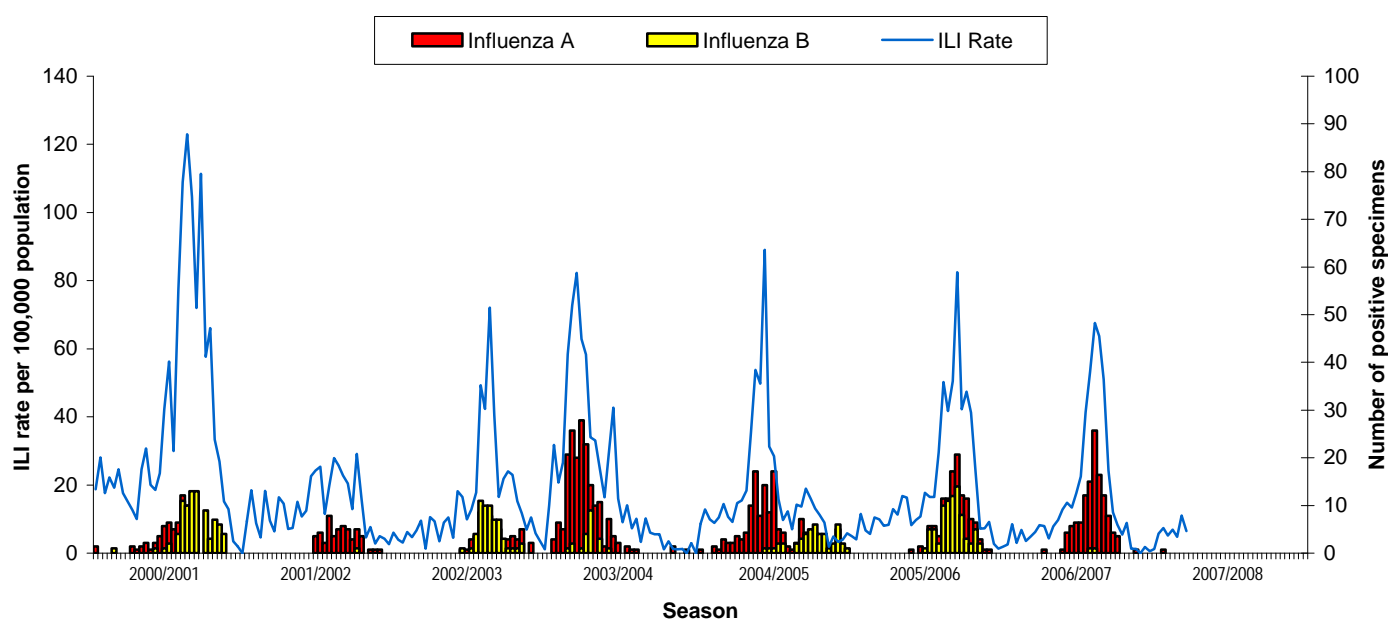


Figure 3: GP ILI consultation rate per 100,000 population and the number of positive influenza specimens detected by the NVRL by week and season, 2000/2001 - 2007/2008

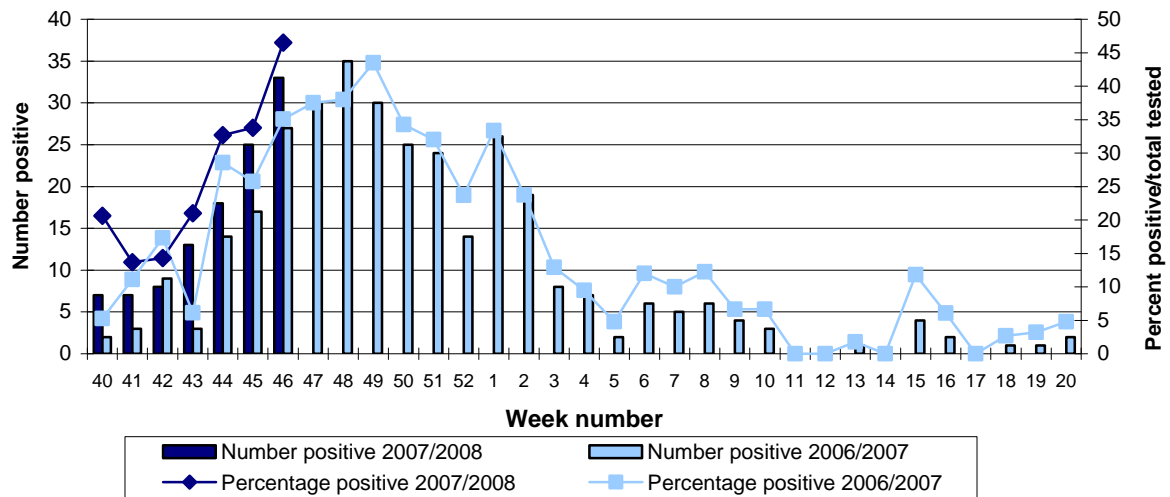


Figure 4. Number and percentage of non-sentinel RSV positive specimens detected during the 2006/2007 and 2007/2008 influenza seasons

Weekly Influenza Notifications

One influenza A confirmed case was notified to HPSC from HSE-MW during week 45 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.

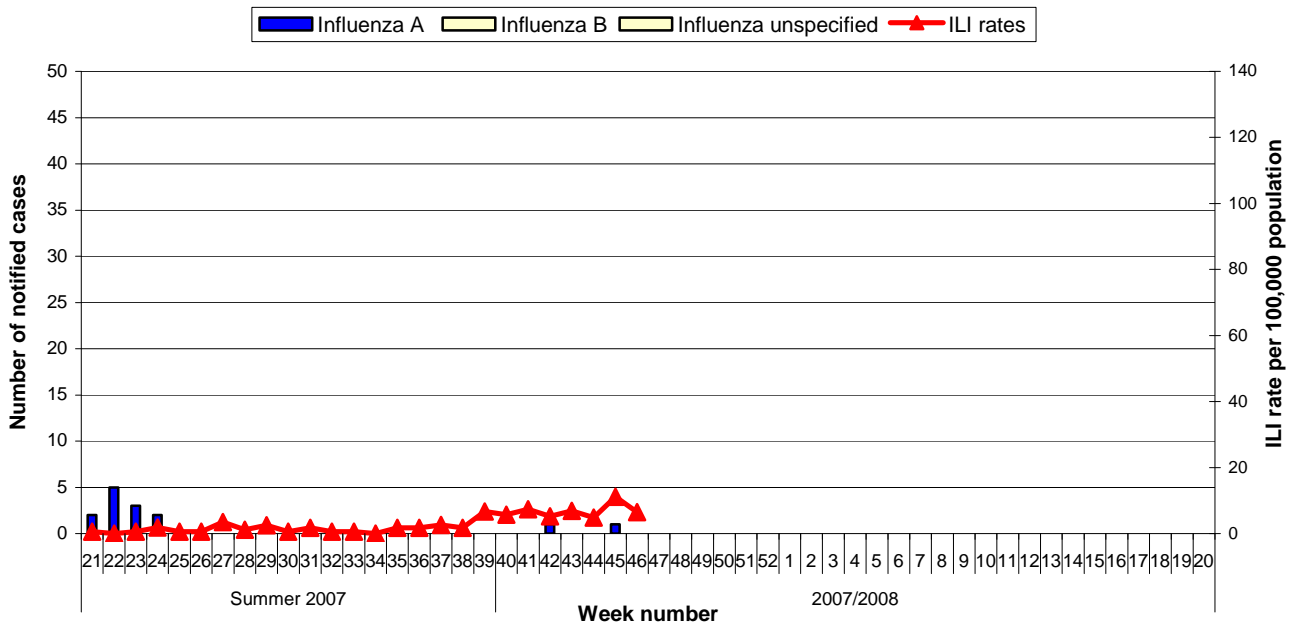


Figure 5: Number of notifications* of influenza (possible & confirmed) by type and by week of notification compared to sentinel GP ILI consultation rates per 100,000 population during the summer of 2007 and the 2007/2008 influenza season
 *Notification data are provisional and were extracted from [CIDR](#) on the 22/11/2007 at 09:08

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. School absenteeism increased in two sentinel primary schools, one in HSE-M (week 45 2007) and one in HSE-NE (week 46 2007) and in two sentinel secondary schools, one in HSE-NE (week 46 2007) and one in HSE-MW (week 46 2007). During week 45 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 45 2007 (figure 6).

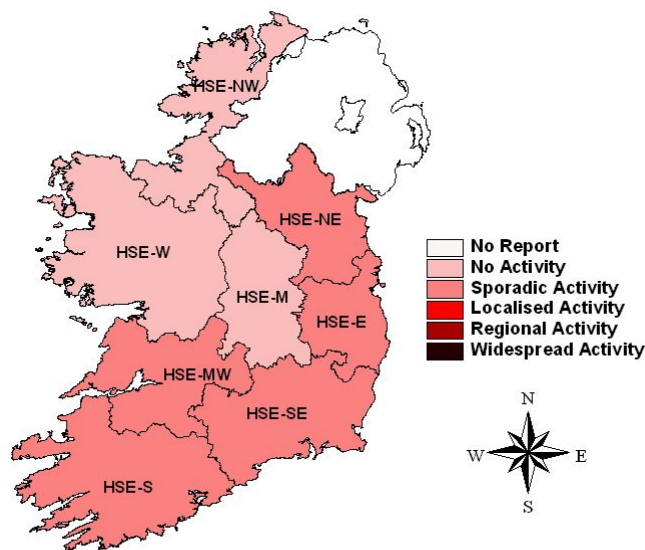


Figure 6: Map of influenza activity by HSE-Health Area during week 45 2007

Influenza Activity in Northern Ireland

During week 46 2007, six cases of clinical influenza and 35 ILI cases were reported in Northern Ireland, corresponding to a combined rate of 29.8 per 100,000 population, a decrease from the updated rate of 36.9 per 100,000 for week 45 2007. Forty non-sentinel and four sentinel specimens were tested during week 46 2007, none of which were positive for influenza virus. <http://www.cdscni.org.uk>

Influenza Activity in England, Scotland & Wales

Influenza activity remains low and below baseline threshold levels across England, Scotland and Wales. Clinical indicators of influenza activity have remained stable in England at 8.4 per 100,000 population in week 45 2007 and 9.2 per 100,000 in week 46 2007; Scotland at 17 per 100,000 in both week 45 2007 and 46 2007; and Wales at 1.7 per 100,000 in week 45 2007 and 2.0 per 100,000 in week 46 2007. Detections of influenza A and B from NHS and HPA laboratories are at low levels. 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 46 2007, two were positive for RSV and one for influenza A(H1N1). To date this season, ten influenza viruses have been isolated: 8 A (H1N1) and 2 B.

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

Influenza Activity in Europe

In Europe, levels of influenza activity remain low and at levels normally observed outside the seasonal influenza peak period, which is typical for this time of the year. During week 45 2007, sporadic influenza activity was reported in England, France, Scotland and Slovakia; the remaining 24 countries reporting to the European Influenza Surveillance Scheme (EISS) reported no influenza activity. The total number of respiratory specimens collected by sentinel physicians in week 45 2007 was 270, four (1.5%) of which were positive for influenza: 1 A untyped (Spain) and 3 A(H1) (one from Germany and two from Slovakia). Nine non-sentinel specimens were positive for influenza virus during week 45 2007: 1 A (H1), 1 A (H3), 3 A (untyped) and 4 B. No particular influenza type/subtype has yet emerged as the dominant influenza virus in Europe this season. Based on the antigenic and/or genetic characterisation of ten influenza viruses, eight were A/Solomon Island/3/2006 (H1N1)-like and two were B/Florida/4/2006-like (B/Yamagata/16/88 lineage). <http://www.eiss.org/index.cgi>

Influenza Activity in Canada

During week 45 2007, influenza activity levels remained low in Canada, with most regions across the country reporting no activity. The ILI consultation rate increased slightly from previous weeks, but remained below the expected range. The number of regions reporting sporadic influenza activity increased from six regions in week 44 2007 to 11 regions in week 45 2007. Localised activity continued to be reported in Ontario. Of the influenza detections to date, 86% (19/22) were influenza A and 14% (3/22) were influenza B. Based on antigenic characterisation of seven 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 two were B/Florida/4/2006-like. <http://www.phac-aspc.gc.ca/fluwatch/index.html>

Influenza Activity in the United States

During week 45 2007, low levels of influenza activity were reported in the United States. Three states reported localised activity; 21 states and the District of Columbia reported sporadic influenza activity; and 26 states reported no influenza activity. The proportion of outpatient visits for ILI and ARI was below national baseline levels. Two regions reported ILI slightly above their region-specific baselines. During week 45 2007, 1,811 specimens were tested for influenza viruses, 48 (2.7%) of which were positive: 3 A (H1), 1 A (H3), 40 A (untyped) and 4 B. CDC has antigenically characterised one influenza virus this season, B/Florida/04/2006, belonging to the B/Yamagata lineage. <http://www.cdc.gov/flu/weekly/fluactivity.htm>

Influenza Activity Worldwide

During week 45 2007, sporadic influenza activity was reported in China (2 A H1, 6 A H3, 1 A untyped and 52 B), Mongolia (1 A H1) and Tunisia (1 B). No influenza activity was reported in Chile and Sri-Lanka. <http://gamapservr.who.int/GlobalAtlas/home.asp>

Avian Influenza

As of the 12th 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, antiviral drugs and seasonal influenza vaccination has been offered to 95 people working on farms involved in the current avian influenza outbreak. The Department for the Environment, Food and Rural Affairs (Defra) has confirmed avian influenza A (H5N1) on a poultry farm near Diss, on the Norfolk/Suffolk border. The affected premises were put under restriction on the 12th 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.

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

WHO 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

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^a
- a B/Malaysia/2506/2004-like virus

Candidate vaccine viruses include:

- ^aA/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