

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 50 2006 (11th to 17th December 2006)

Summary

During week 50 2006, influenza activity was at low levels in Ireland, with twelve influenza-like illness (ILI) cases reported by sentinel GPs. No specimens tested by the NVRL were positive for influenza virus during week 50.

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

Twelve ILI cases were reported from sentinel GPs during week 50 2006, corresponding to an ILI consultation rate of 7.7 per 100,000 population, an increase from the rate of 3.9 in week 49 (figure 1).

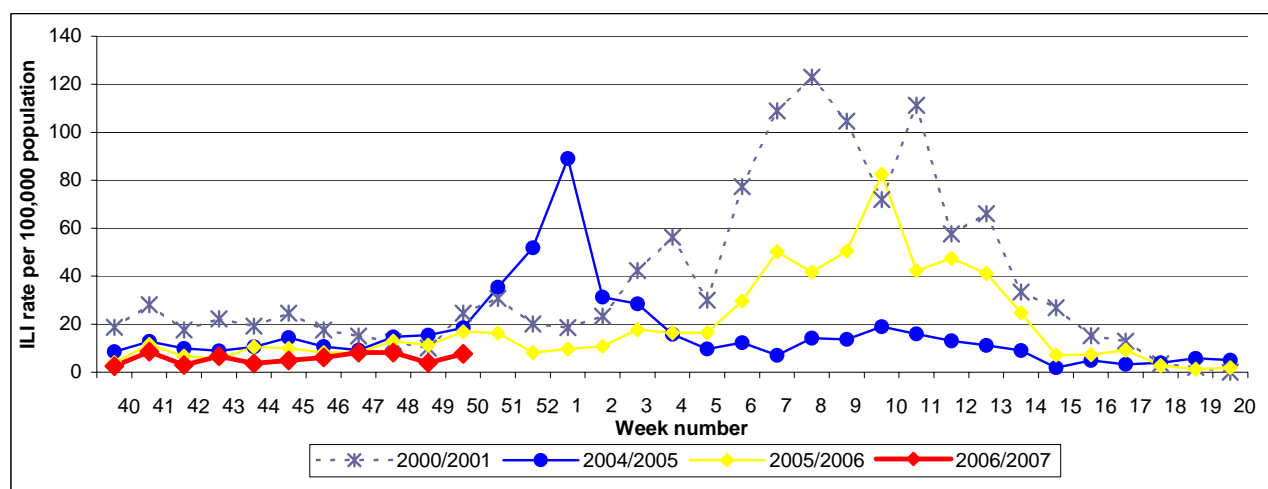


Figure 1: GP consultation rate for ILI per 100,000 population by week, during the 2000/2001*, 2004/2005, 2005/2006 & 2006/2007 influenza seasons.

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

Results (continued)

Two cases were in the 0-4 years age group, (18.1 per 100,000 population), one case was in the 5-14 years age group (4.6 per 100,000 population), eight cases were in the 15-64 years age group (7.6 per 100,000 population) and one case was in the 65 years and older age group (5.8 per 100,000 population) as shown in figure 2. Forty-two of the 46 (91.3%) sentinel general practices reported during week 50 2006, with six reporting ILI.

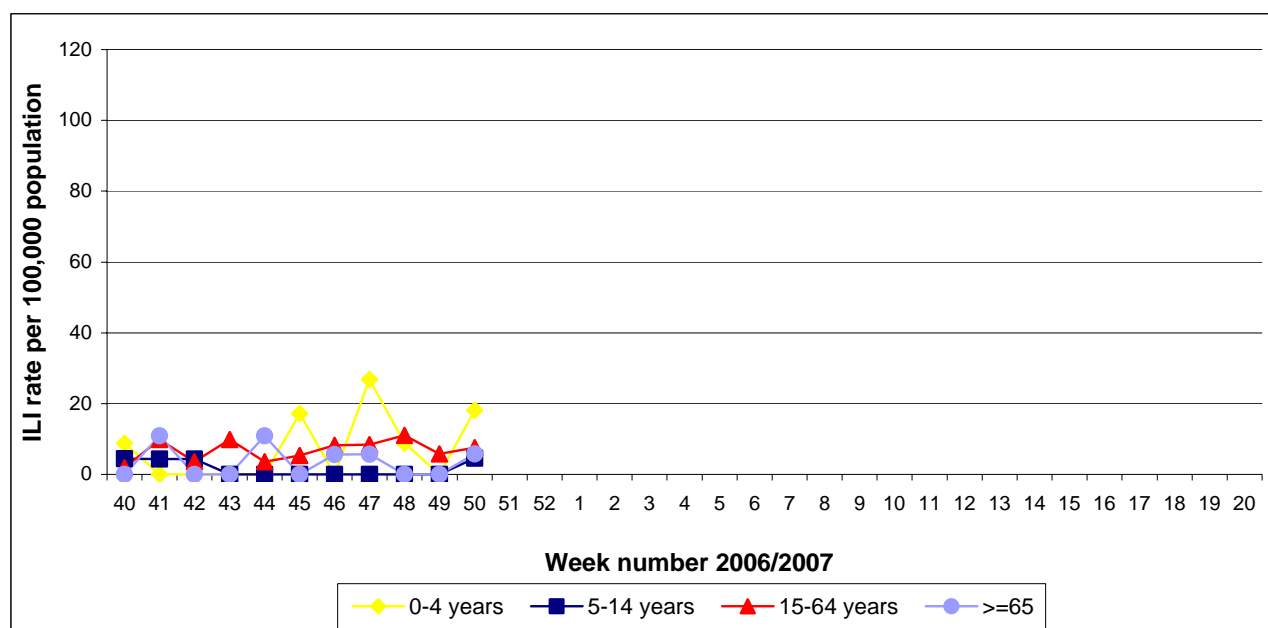


Figure 2: Age specific GP consultation rate* for ILI per 100,000 population by week during the 2006/2007 influenza season. *Please note the denominator used in the age specific consultation rate is from the 2002 census data; this assumes that the age distribution of the sentinel general practices is similar to the national age distribution.

Virological Data from the National Virus Reference Laboratory (NVRL)

The NVRL tested five specimens taken by sentinel GPs during week 50 2006, all of which were negative for influenza virus. The NVRL also tested 69 non-sentinel specimens taken during week 50 2006, mainly from hospitalised paediatric cases. Twenty-four 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 50 2006 and the 2006/2007 season to date

Week Number	Specimen Type	Total Specimens	No. Influenza Positive	% Influenza Positive	Influenza A	Influenza B	RSV
50 2006	Sentinel	5	0	0.0	0	0	NA
	Non-Sentinel	69	0	0.0	0	0	24
	Total	74	0	0.0	0	0	24
40-50 2006	Sentinel	58	1	1.7	1	0	NA
	Non-Sentinel	668	0	0.0	0	0	194
	Total	726	1	0.1	1	0	194

*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.

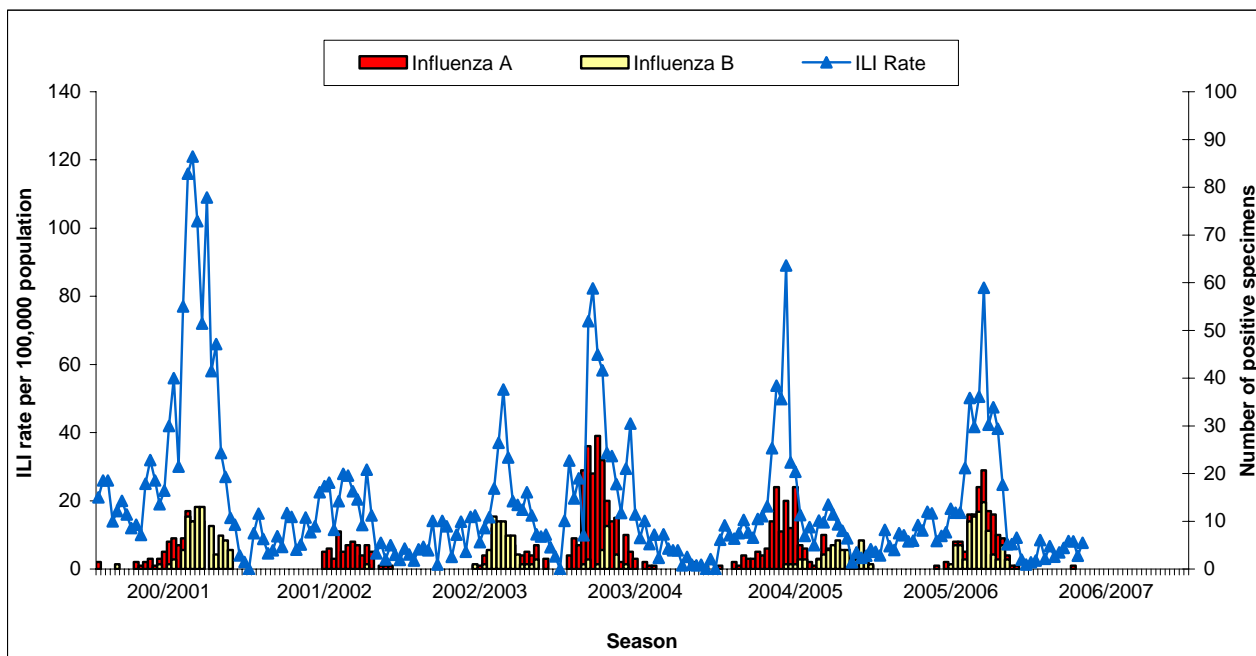


Figure 3: ILI rate per 100,000 population and the number of positive influenza specimens detected by the NVRL during the 2000/2001, 2001/2002, 2002/2003, 2003/2004, 2004/2005, 2005/2006 & 2006/2007 seasons.

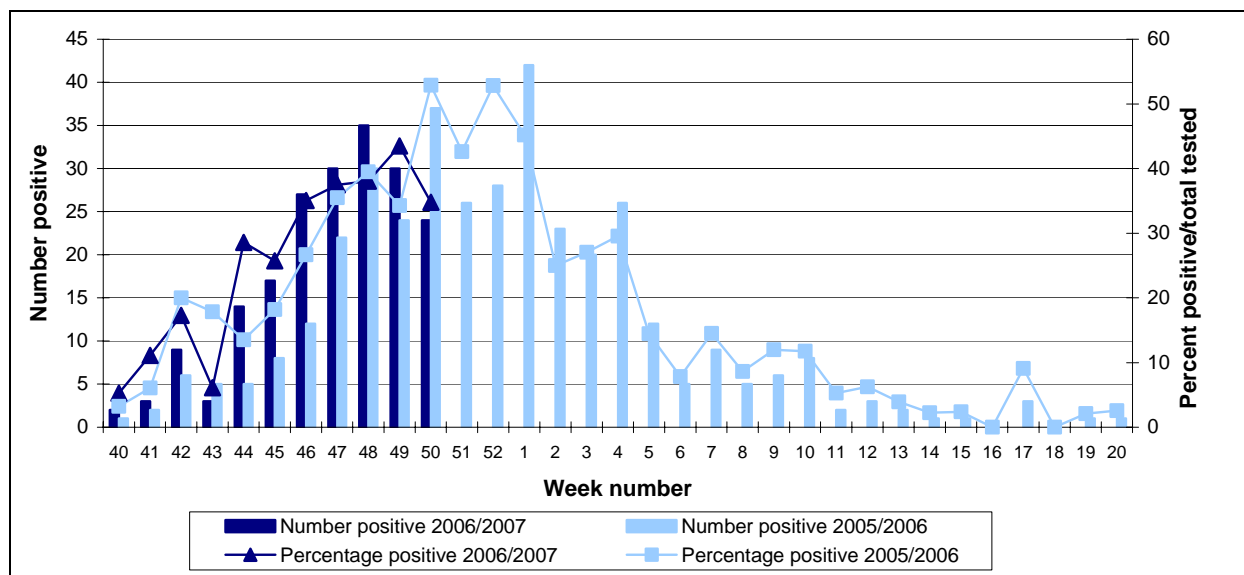


Figure 4. Number and percentage of non-sentinel RSV positive specimens detected during the 2005/2006 and 2006/2007 influenza seasons.

Weekly Influenza Notifications

No influenza cases were notified to HPSC during week 50 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.

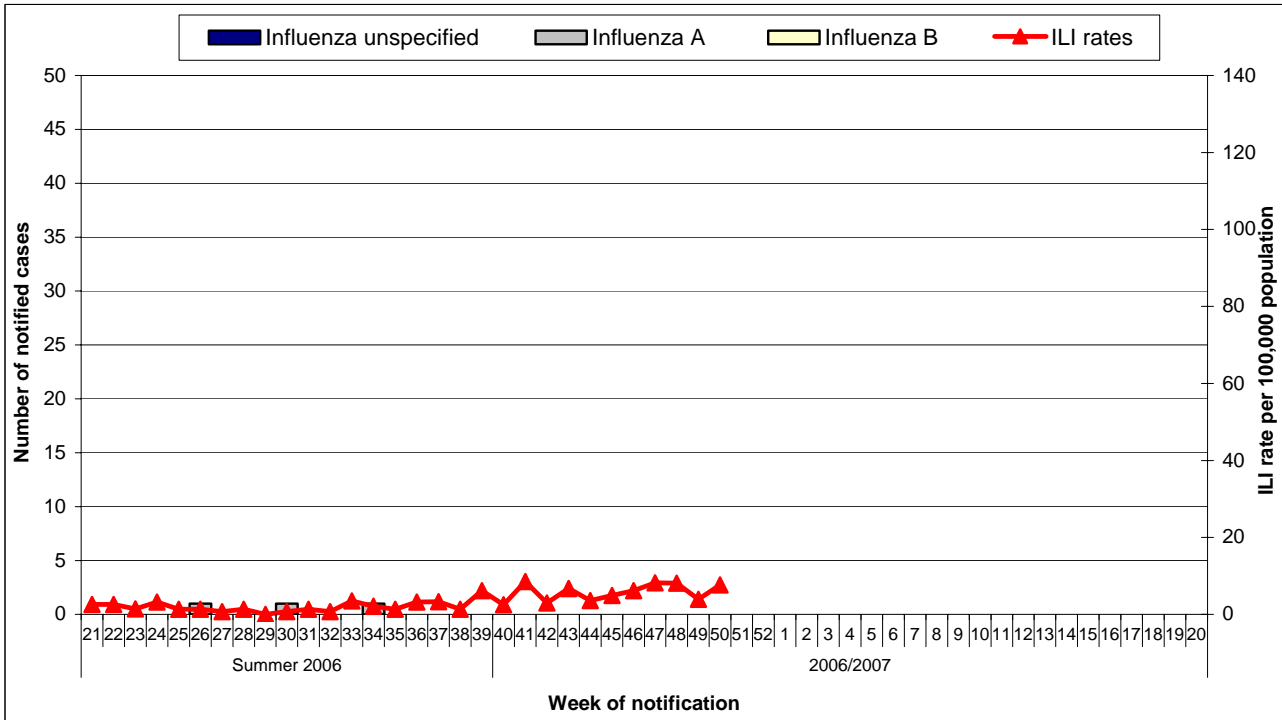


Figure 5: Number of notifications* of influenza (possible & confirmed) by type and by week of notification compared to sentinel GP ILI consultation rates per 100,000 population during the summer of 2006 and the 2006/2007 influenza season.

*Notification data are provisional and were extracted from [CIDR](#) on the 20/12/2006 at 10.21

Mortality Data

No deaths registered during week 50 2006 were attributed to influenza.

Outbreak Reports

No influenza/ILI outbreaks were reported to HPSC during week 50 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-MWA, -NEA and -SEA. No activity was reported from HSE-ER, -MA, -NWA, -SA and -WA during week 49 2006 (figure 6). During week 49, one sentinel school in HSE-MA reported high levels of absenteeism.

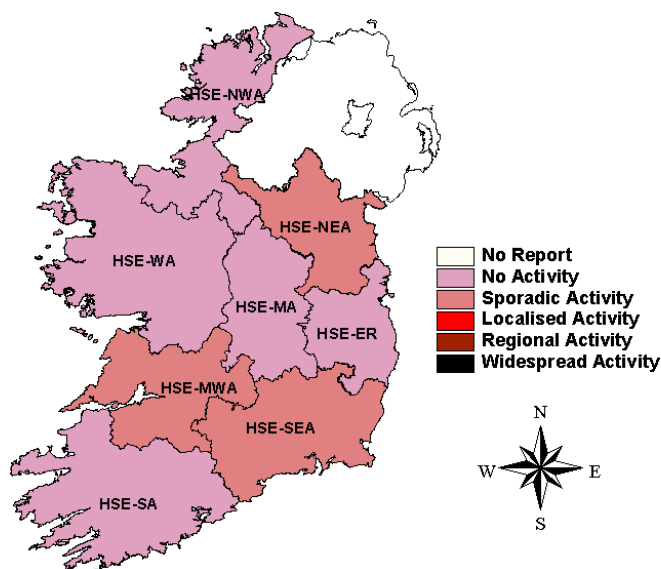


Figure 6: Map of influenza activity by HSE-Health Area during week 49 2006

Influenza Activity in Northern Ireland

Seventy-four ILI cases and six cases of clinical influenza were reported from sentinel GPs in Northern Ireland during week 50 2006, corresponding to a combined rate of 84.4 per 100,000 population, a decrease from the updated rate of 91.6 per 100,000 population during week 49. One influenza A (H3) was detected during week 50 2006 in a hospitalised 5 month old baby co-infected with RSV. This is the first influenza detection of the season. <http://www.cdscni.org.uk>

Influenza Activity in England, Scotland & Wales

Clinical influenza activity in the United Kingdom is currently well within baseline levels in England, Wales and Scotland. Two samples referred to the Centre for Infections Respiratory Virus Unit (RVU) tested positive for influenza during week 50 2006. One was an influenza A (H3) subtype and one was an influenza A(H1) subtype. Both were isolated from community sources in the northern region of England <http://www.hpa.org.uk/infections/topics%5Faz/influenza/seasonal/activity0607/flureport.htm>

Influenza Activity in Europe

During week 49 2006, national network levels of influenza-like illness (ILI) and/or acute respiratory infection (ARI) were at a low level in 26 countries. Data from France, Luxembourg, Norway, Romania, Scotland and Switzerland indicated sporadic activity (isolated cases of laboratory confirmed influenza) whilst 22 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 503, of which ten (2.0%) were positive for influenza virus. The positive specimens were collected in Austria (one), the Czech Republic (one), France (two), Luxembourg (one), Romania (one), Sweden (one) and Switzerland (three). In addition, 22 influenza virus positive specimens from non-sentinel sources (e.g. specimens collected in hospitals) were reported [Norway (five), France (two), Scotland (six), Sweden (eight) and Switzerland (one)]. All positive specimens except for one from Romania were influenza A. Based on subtyping data of all influenza virus detections (N=146; sentinel and non-sentinel data), 87 (60%) were A unsubtype, six (4%) were A(H1), three (2%) were A(H1N1), 20 (14%) were influenza A(H3), 18 (12%) were A(H3N2) and 12 (8%) were B.

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

Influenza Activity in Canada

During week 49, localised influenza activity was reported in all regions of Alberta and in one region of Ontario. Sporadic influenza activity was reported in several regions (in the West, Ontario and Quebec) while the rest of the country reported no activity. In week 49, 93 (4%) of the 2,302 specimens tested for influenza virus were positive and all but 2 were influenza A. Most (98%) of the influenza detections this season have been influenza A. The ILI consultation rate decreased from 30 per 1,000 patient visits in week 48 to 25 per 1,000 patient visits in week 49, which is within the expected range for this week. During week 49, the sentinel response rate was 75%. Eleven new outbreaks of ILI were reported in schools in Alberta this week. The National Microbiology Laboratory (NML) has characterised 33 influenza viruses for the 2006-2007 influenza season: 19 (58%) A/Wisconsin/67/05(H3N2)-like viruses (from Ontario), 13 (39%) A/New Caledonia/20/99(H1N1)-like viruses (from Alberta and British Columbia), and one (3%) B/Malaysia/2506/04-like virus (from Ontario). All three strains are included in the composition of the 2006-2007 Canadian influenza vaccine.

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

Influenza Activity in the United States

During week 49, influenza activity remained low overall in the United States, but increased in the Southeast. Among specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories for influenza, 4.9% were positive. One state reported widespread influenza activity, three states reported regional influenza activity, seven states reported local influenza activity, 30 states and New York City reported sporadic influenza activity and nine states and the District of Columbia reported no influenza activity. On a national level, laboratory, outpatient ILI and mortality surveillance increased slightly from week 48 to week 49, but the ILI and mortality data remain below baseline levels. During week 49, WHO and NREVSS laboratories reported 2,470 specimens tested for influenza viruses, 121 (4.9%) of which were positive: 21 influenza A (H1) viruses, 75 influenza A unsubtype and 25 influenza B viruses. Since October 1, 2006, WHO and NREVSS laboratories have tested a total of 27,474 specimens for influenza viruses and 884 (3.2%) were positive. Among the 884 influenza viruses, 689 (78%) were influenza A viruses and 195 (22%) were influenza B viruses. One hundred seventy-one (25%) of the 689 influenza A viruses have been subtyped: 162 (95%) were influenza A (H1) viruses and nine (5.3%) were influenza A (H3) viruses. Thirty-seven states have reported positive laboratory influenza tests. Of the 884 influenza positive tests reported this season, 441 (50%) have been reported from Florida.

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

Influenza Activity Worldwide

During week 49 2006 the following influenza isolates were reported; China 8 (3 A unsubtype, 4 A(H3) and 1 B), Japan 4 (1 A(H1), 1 A(H3) and 2 B), Madagascar 4 B and Tunisia 4 influenza unspecified.

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

Avian Influenza

As of the 20th December 2006, 258 confirmed human cases and 154 (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.

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/>

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

Candidate vaccine viruses include:

^aA/Wisconsin/67/2005 (H3N2) and A/Hiroshima/52/2005

^bB/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

HPSC, ICGP and NVRL wish to thank the sentinel GPs who have participated in the GP sentinel surveillance system and who have contributed towards this report

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