

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 42 2007 (15th – 21st October 2007)

Summary

During week 42 2007, influenza activity was at low levels in Ireland, as expected for the time of year. Nine influenza-like illness (ILI) cases were reported by sentinel GPs during this period. No positive influenza specimens were detected by the NVRL during week 42 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

Nine ILI cases were reported from sentinel GPs during week 42 2007, corresponding to an ILI consultation rate of 5.8 per 100,000 population, a decrease from the updated rate of 7.1 per 100,000 in week 41 2007 (figure 1). Forty-one of 49 (83.7%) sentinel general practices reported during week 42 2007, with seven reporting ILI cases.

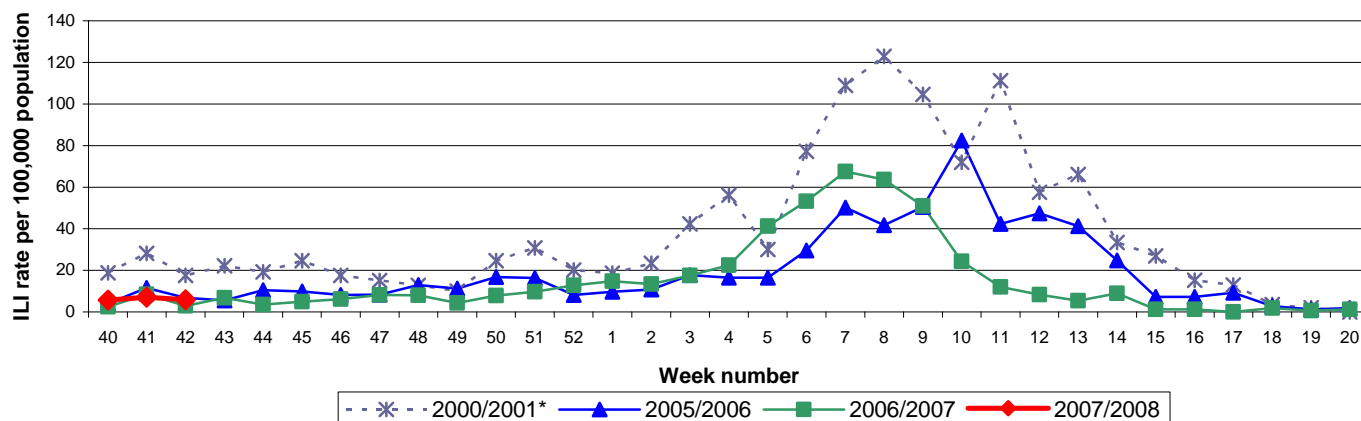


Figure 1: GP consultation rate for ILI per 100,000 population by week, during the 2000/2001*, 2005/2006, 2006/2007 & 2007/2008 influenza seasons *Highest recorded levels of ILI activity since initiation of sentinel surveillance

Results (continued)

Two ILI cases were reported in the 0-4 year age group (18.1 per 100,000 population) and seven ILI cases were reported in the 15-64 year age group (6.6 per 100,000 population), as shown in figure 2. No ILI cases were reported in the 5-14 year age group or in those aged 65 years or older.

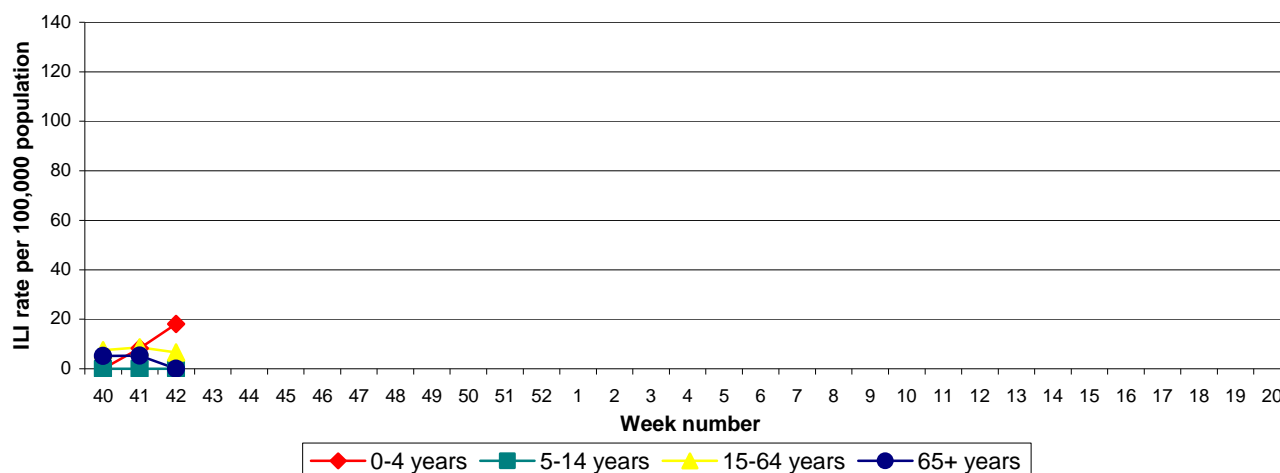


Figure 2: Age specific GP consultation rate* for ILI per 100,000 population by week during the 2007/2008 influenza season
*Please note the denominator used in the age specific consultation rate is from the 2006 census data; this assumes that the age distribution of the sentinel general practices is similar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

Virological Data from the NVRL

The NVRL tested three specimens taken by sentinel GPs during week 42 2007, all of which were negative for influenza virus. The NVRL also tested 54 non-sentinel specimens taken during week 42 2007, mainly from hospitalised paediatric cases. All non-sentinel specimens were negative for influenza virus and eight 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 (unsubtyped).

Influenza positive specimens by HSE-Area and age group (in years), for week 42 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 42 2007 and the 2007/2008 season to date

Week Number	Specimen Type	Total Specimens	No. Influenza Positive	% Influenza Positive	Influenza A	Influenza B	RSV
42 2007	Sentinel	3	0	0.0	0	0	NA
	Non-Sentinel	54	0	0.0	0	0	8
	Total	57	0	0.0	0	0	8
Season to date	Sentinel	15	1	6.7	1	0	NA
	Non-Sentinel	139	0	0.0	0	0	21
	Total	154	1	0.6	1	0	21

*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 42 2007 and the 2007/2008 season to date

	Week 42 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 42 2007 and the 2007/2008 season to date

	Week 41 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

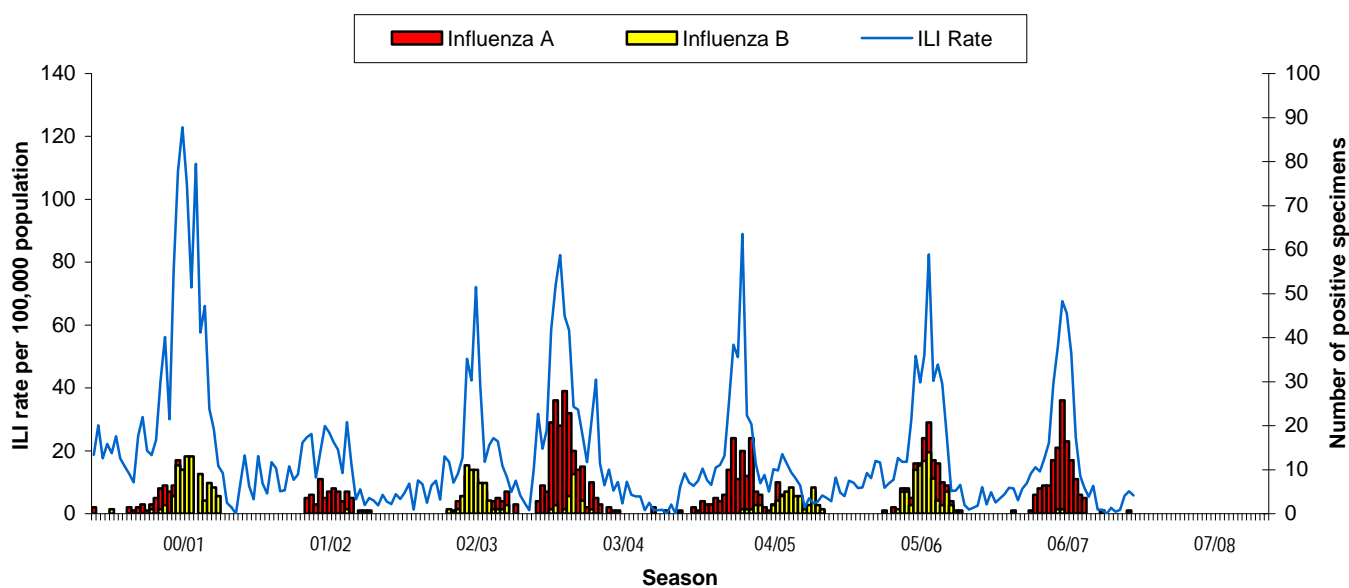


Figure 3: GP ILI consultation rate per 100,000 population and the number of positive influenza specimens detected by the NVRL by week and season, 2000/2001 - 2007/2008

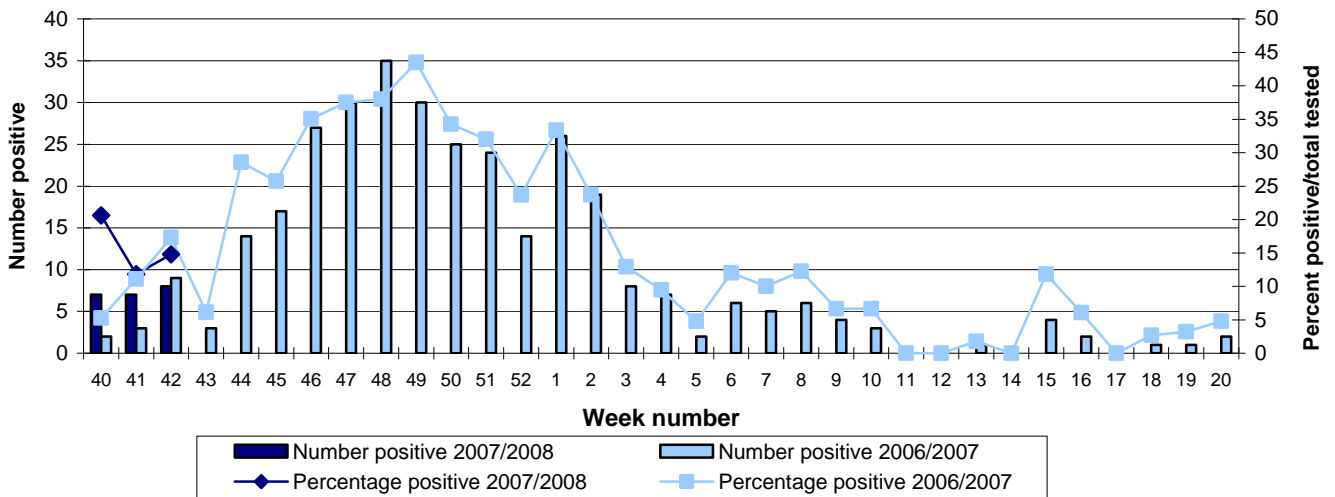


Figure 4. Number and percentage of non-sentinel RSV positive specimens detected during the 2006/2007 and 2007/2008 influenza seasons

Weekly Influenza Notifications

One influenza A case was notified to HPSC during week 42 2007, from HSE-S. This is the same case that was reported through the GP sentinel surveillance system during week 41 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.

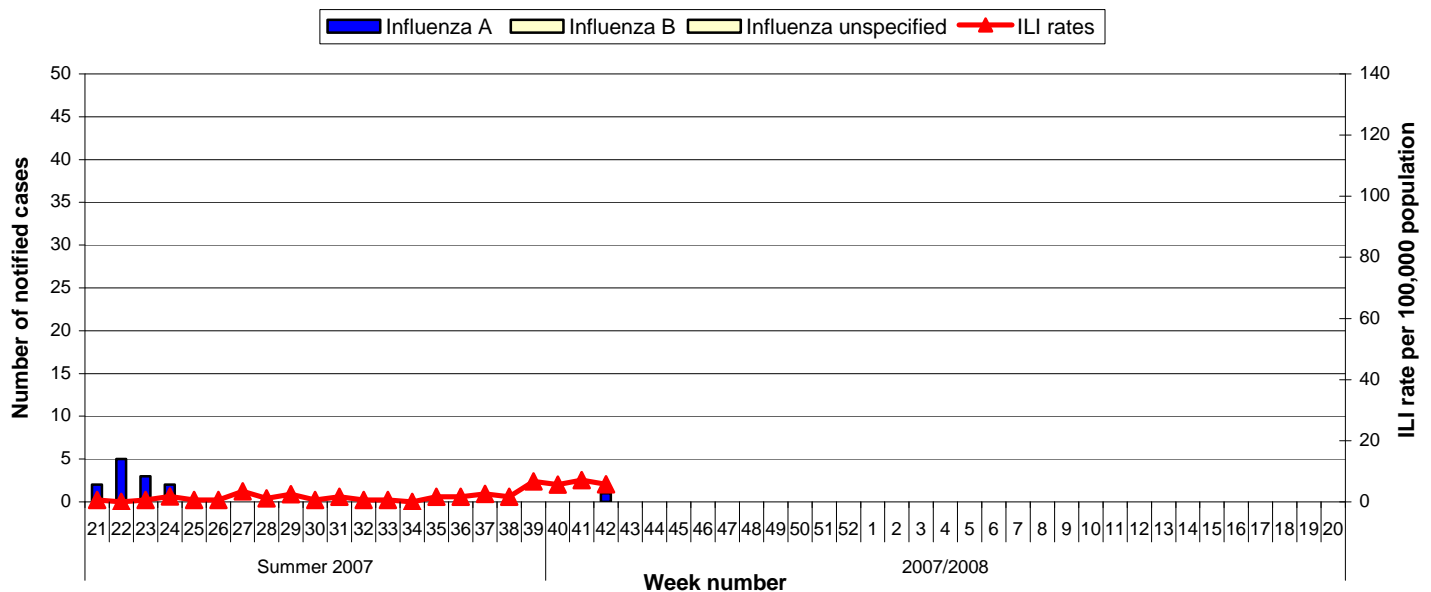


Figure 5: Number of notifications* of influenza (possible & confirmed) by type and by week of notification compared to sentinel GP ILI consultation rates per 100,000 population during the summer of 2007 and the 2007/2008 influenza season
 *Notification data are provisional and were extracted from [CIDR](#) on the 24/10/2007 at 02.30

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 absenteeism was reported in one sentinel primary school in HSE-M during week 42 2007 and in two sentinel secondary schools during weeks 41 and 42 2007 (one in HSE-E during weeks 41 & 42 2007 and one in HSE-NE during week 41 2007). A slight increase in respiratory admissions was reported in sentinel hospitals in HSE-E, -M, -NW and -W, although the levels are as expected for the time of year.

During week 41 2007 sporadic influenza activity (based on isolated cases of ILI and one confirmed influenza positive specimen) was reported in five HSE-Areas: HSE-E, -MW, -NW, -SE and -S (figure 6). No influenza activity was reported in HSE-NE, -M, and -W during week 41 2007.

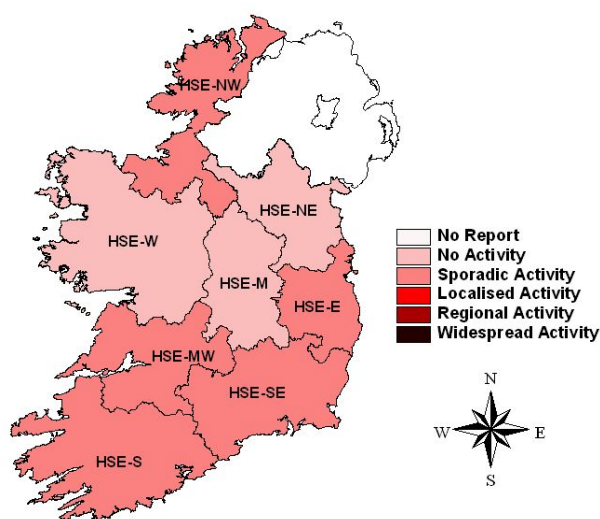


Figure 6: Map of influenza activity by HSE-Health Area during week 41 2007

Influenza Activity in Northern Ireland

During week 42 2007, five cases of clinical influenza and 25 ILI cases were reported in Northern Ireland, corresponding to a combined rate of 20.2 per 100,000 population, a slight decrease from the updated rate of 26.9 per 100,000 for week 41 2007. Seventeen non-sentinel and two sentinel swabs were tested during week 42 2007, none of which were positive for influenza virus. <http://www.cdscni.org.uk>

Influenza Activity in England, Scotland & Wales

During week 42 2007, influenza activity remained low across the United Kingdom. Influenza activity was stable and below baseline threshold levels in England, Scotland and Wales. Detections of influenza A and B from NHS and HPA laboratories were at low levels, as expected for this time of year. Laboratory confirmed infections of RSV are increasing and are at higher levels than those recorded last season (2006/2007). No specimens sent to the Respiratory Virus Unit at the Centre for Infections during week 42 2007 were positive for influenza; one specimen was positive for RSV. Since week 40 2007, three influenza viruses have been isolated: two influenza A (H1) and one influenza B. <http://www.hpa.org.uk/infections/topics%5Faz/influenza/seasonal/flureports0708.htm>

Influenza Activity in Europe

Levels of influenza activity in Europe are currently low, with all countries reporting only sporadic or no influenza activity during week 41 2007. To date this season, the consultation rates for ILI and/or ARI are at levels usually reported outside the winter period. There have been sporadic laboratory confirmed cases of influenza across Europe in the past four weeks: twelve cases of influenza A and seven cases of influenza B. A number of these cases were reported to be infections acquired outside of Europe. It is currently too early to say which virus type or subtype will become dominant in Europe this season.

The total number of respiratory specimens collected by sentinel physicians in week 41 2007 was 102, three (2.9%) of which were influenza virus positive (one type A each in Ireland and Spain, and one type B in the Netherlands). In addition, three influenza A virus detections were reported from non-sentinel sources, in Denmark (A H3N2), France and the Netherlands. Based on subtyping data of all influenza virus detections from weeks 38 to 41 2007 (N=31; sentinel and non-sentinel data), six were A (unsubtyped), three were A(H3), three were A(H1) and seven were B. The influenza virus detections were reported by the following countries: Belgium (1), Denmark (1), England (3), Estonia (1), France (4), Germany (2), Ireland (1), the Netherlands (3), Spain (1), and Sweden (2). Based on the antigenic and/or genetic characterisation of three influenza viruses, two were A/Solomon Island/3/2006 (H1N1)-like and one was B/Florida/4/2006-like (the B/Yamagata/16/88 lineage).
<http://www.eiss.org/index.cgi>

Influenza Activity in Canada

During week 41 2007, influenza activity remained low in Canada with only four regions reporting sporadic activity. The ILI consultation rate was similar to previous weeks (15 per 1,000 patient visits) and is within the expected range. In week 41 2007, only one of the 1082 (0.1%) specimens tested was positive for influenza A virus. In the current season to date, no new laboratory-confirmed influenza-associated paediatric hospitalisations were reported.
<http://www.phac-aspc.gc.ca/fluwatch/index.html>

Influenza Activity in the United States

During week 41 2007, a low level of influenza activity was reported in the United States. Twelve states and the District of Columbia reported sporadic influenza activity; and 38 states reported no influenza activity. The proportion of outpatient visits for ILI and ARI was below national and region-specific baseline levels. Twenty-one (1.9%) specimens tested by the U.S. WHO and NREVSS collaborating laboratories were positive for influenza. The proportion of deaths attributed to pneumonia and influenza was slightly above the epidemic threshold during week 41 2007. <http://www.cdc.gov/flu/weekly/fluactivity.htm>

Influenza Activity Worldwide

During week 41 2007, sporadic influenza activity was reported in China (3 A H1, 12 A H3, 2 A unsubtyped and 19 B) and Madagascar (7 A H1). No influenza activity was reported in South Africa, Sri-Lanka and Tunisia.
<http://gamapserver.who.int/GlobalAtlas/home.asp>

Avian Influenza

As of the 17th of October 2007, 331 confirmed human cases and 203 (61.3%) 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 the death of a previously confirmed case of H5N1 infection. The 12-year-old male from Tangerang District in Banten Province died on the 13th of October 2007. Of the 109 cases confirmed to date in Indonesia, 88 have been fatal.

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 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

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 Dr. Lisa Domegan and Dr. Joan O'Donnell, HPSC