

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 43 2008 (20th - 26th October 2008)

Summary

During week 43 2008, influenza activity was at low levels in Ireland, with eight influenza-like illness (ILI) cases reported by sentinel GPs. No sentinel specimens tested by the NVRL were positive for influenza virus during week 43.

Background

This is the ninth 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-four 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

Eight ILI cases were reported from sentinel GPs during week 43 2008, corresponding to an ILI consultation rate of 5.5 per 100,000 population, a decrease from the updated rate of 6.7 per 100,000 population during week 42 2008 (figure 1). This ILI rate is below the baseline threshold and within expected levels. The mean ILI rate for week 43 for the last nine seasons (2000/2001-2008/2009) is 10.3 per 100,000 population.

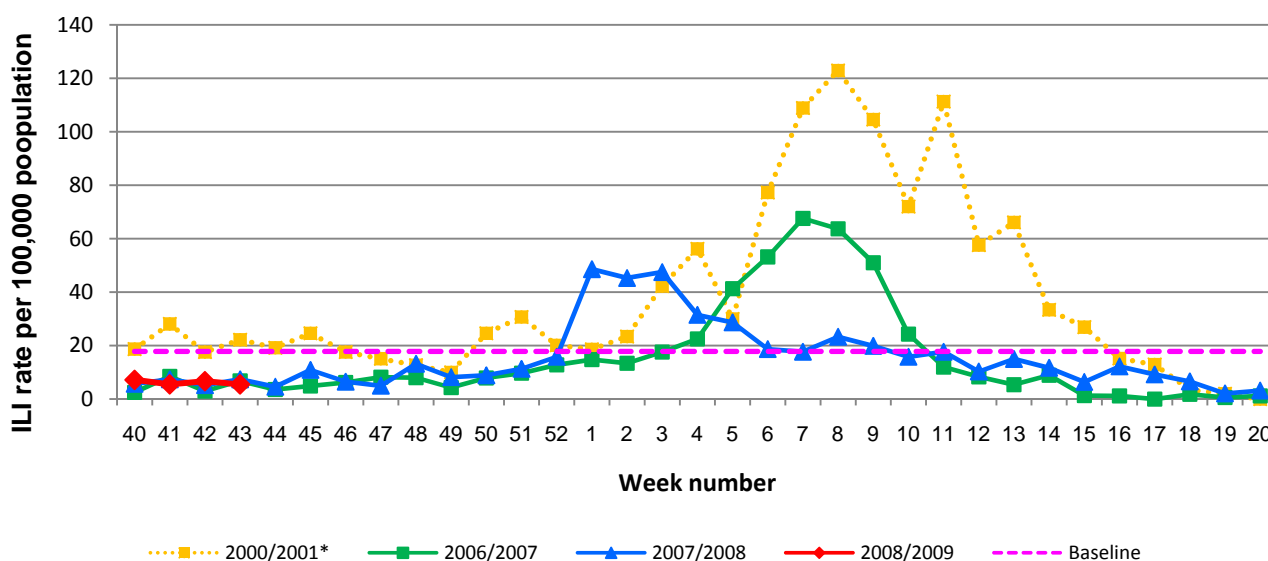


Figure 1: Influenza baseline activity threshold and GP consultation rate for ILI per 100,000 population by week, during the 2000/2001*, 2006/2007, 2007/2008 and 2008/2009 influenza seasons

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

Results (continued)

Forty of 54 (74.1%) sentinel general practices reported during week 43 2008, with five reporting ILI cases. One case was reported in the 0-4 year age group (9.7 per 100,000) and seven ILI cases were reported in the 15-64 year age group (7.1 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.

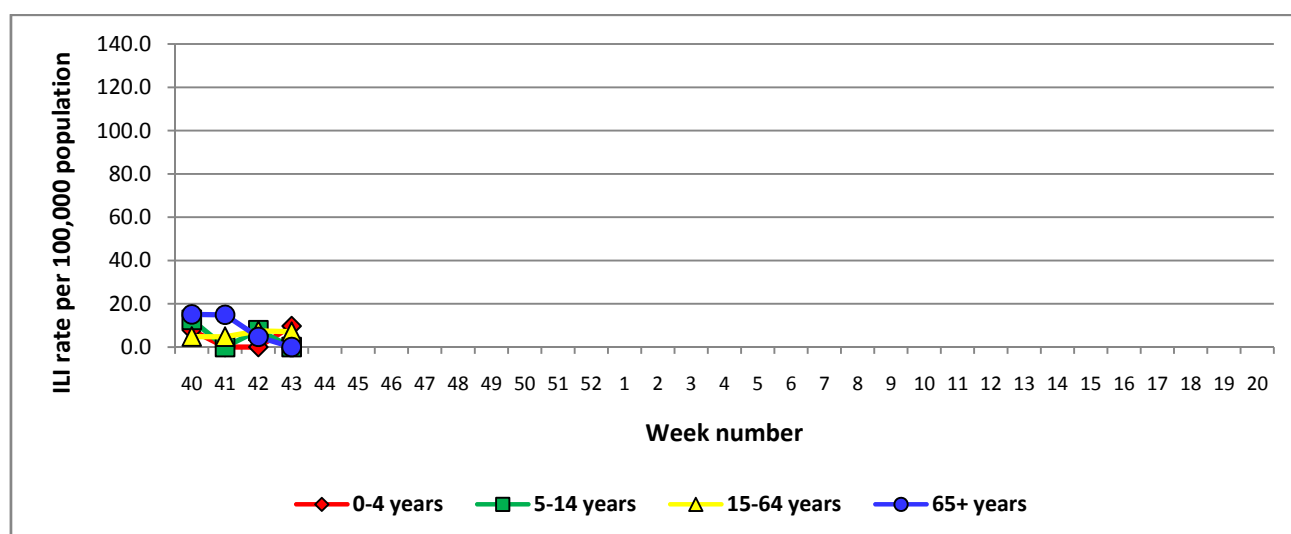


Figure 2: Age specific GP consultation rate* for ILI per 100,000 population by week during the 2008/2009 influenza season
*Please note the denominator used in the age specific consultation rate is from the 2006 census data; this assumes that the age distribution of the sentinel general practices is similar to the national age distribution.

Virological Data from the NVRL

The NVRL tested one specimen taken by sentinel GPs during week 43 2008, which was negative for influenza virus. The NVRL also tested 44 non-sentinel specimens taken during week 43 2008, mainly from hospitalised paediatric cases. All non-sentinel specimens were negative for influenza virus and 10 were positive for respiratory syncytial virus (RSV) (table 1).

Influenza positive specimens by HSE area and age group (in years), for week 43 2008 and the 2008/2009 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 2007/2008 and 2008/2009 influenza seasons. The RSV percentage positive for week 43 2008 (22.7%) is higher than the mean percentage positive value (17.7%) for week 43 for the last nine seasons (2000/2001 -2008/2009).

Table 1: Number of sentinel and non-sentinel* respiratory specimens and positive results for week 43 2008

Week Number	Specimen Type	Total Specimens	No. Influenza Positive	% Influenza Positive	Influenza A	Influenza B	RSV
43 2008	Sentinel	1	0	0.0	0	0	NA
	Non-Sentinel	44	0	0	0	0	10
	Total	45	0	0.0	0	0	10
40-43 2008	Sentinel	12	2	16.7	2	0	NA
	Non-Sentinel	205	0	0.0	0	0	34
	Total	217	2	0.9	2	0	34

Table 2: Total number of sentinel and non-sentinel* influenza A and B positive specimens by HSE area for week 43 2008 and the 2008/2009 season to date

	Week 43 2008			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	1	0	1
HSE-MW	0	0	0	0	0	0
HSE-NE	0	0	0	1	0	1
HSE-NW	0	0	0	0	0	0
HSE-SE	0	0	0	0	0	0
HSE-S	0	0	0	0	0	0
HSE-W	0	0	0	0	0	0
Total	0	0	0	2	0	2

*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 43 2008 and the 2008/2009 season to date

	Week 43 2008			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	1	0	1
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	2	0	2

*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

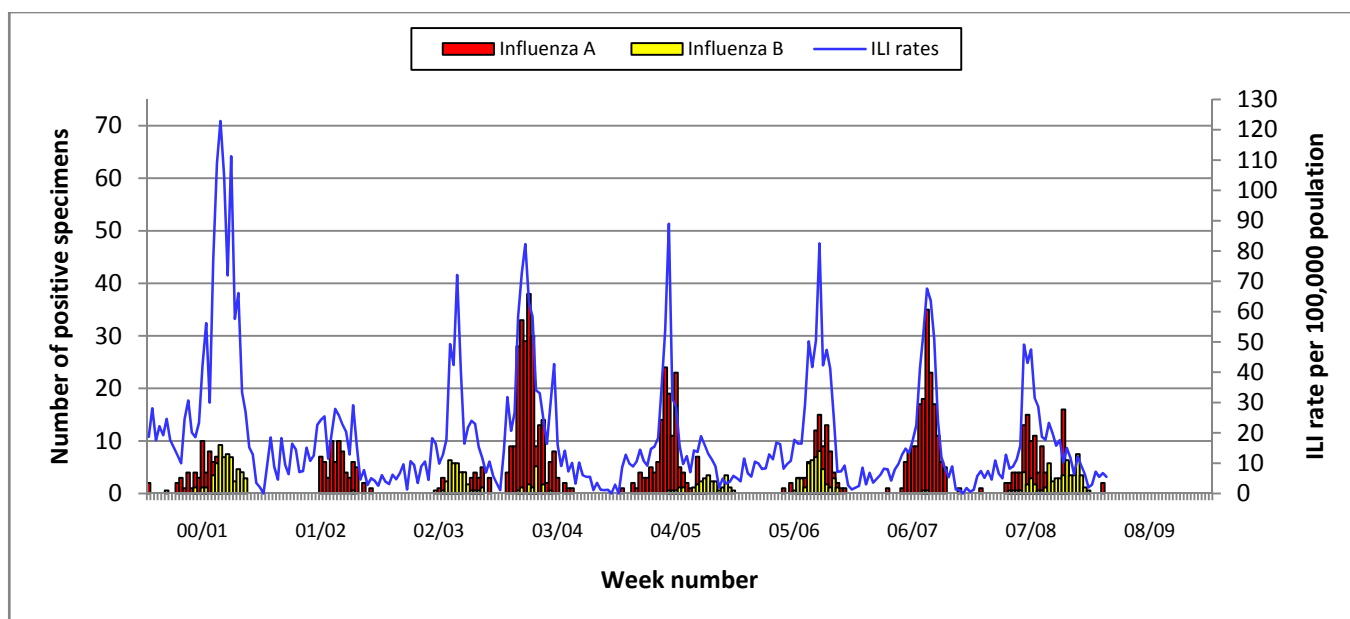


Figure 3: GP ILI consultation rate per 100,000 population and the number of positive influenza specimens detected by the NVRL by week and season, 2000/2001 - 2008/2009

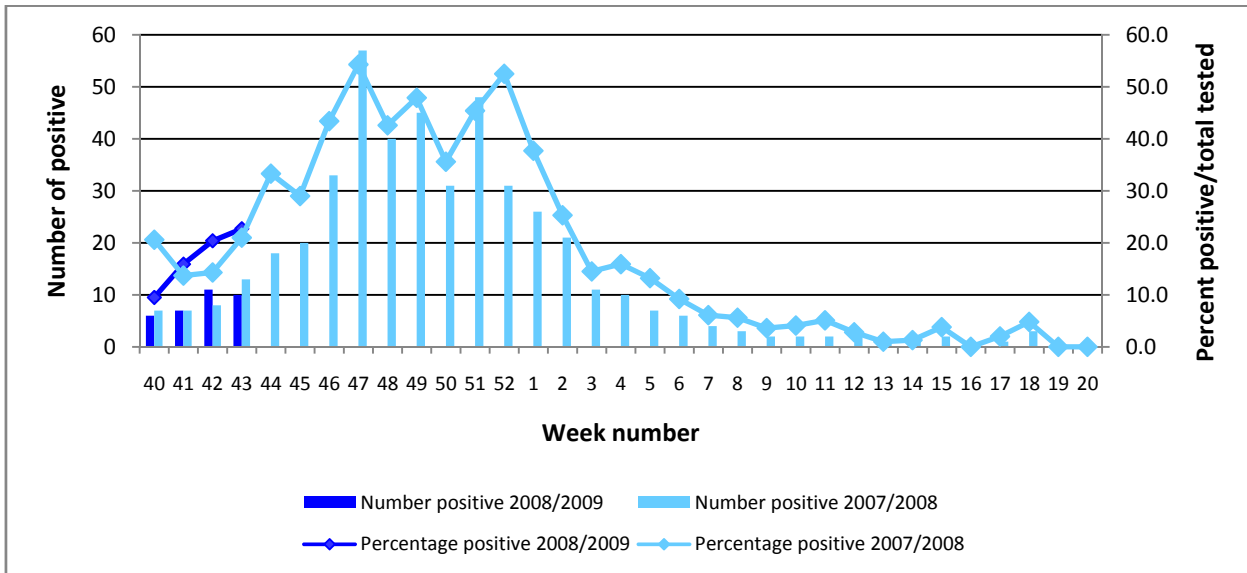


Figure 4. Number and percentage of non-sentinel RSV positive specimens detected during the 2007/2008 and 2008/2009 influenza seasons

Weekly Influenza Notifications

Two influenza A cases were notified to HPSC during week 43 2008, once from HSE-M and one from HSE-NE. It should be noted that 87 influenza (type unspecified) cases notified to HPSC during the 2008 summer season (weeks 21-39 2008) were possible cases (i.e. clinical cases with no laboratory confirmation). These were late GP notifications from HSE-E for 2007. Influenza cases notified to HPSC during the summer of 2008 and during the 2008/2009 influenza season are shown in figure 5 and compared to GP ILI consultation rates.

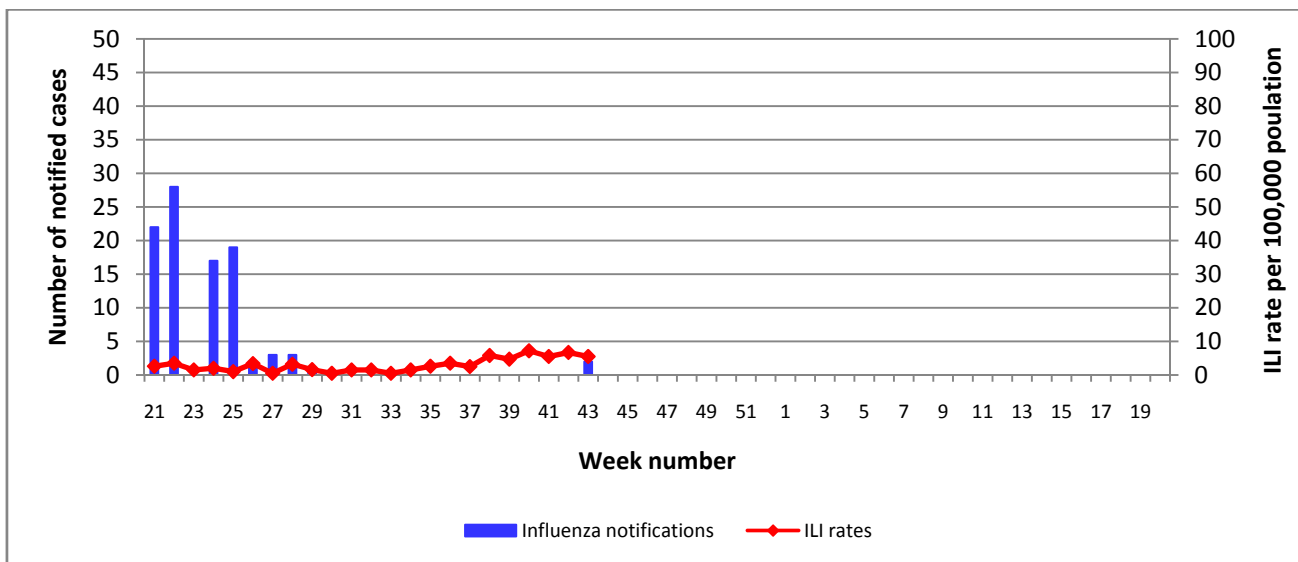


Figure 5: Number of notifications* of influenza by week of notification compared to sentinel GP ILI consultation rates per 100,000 population during the summer of 2008 and the 2008/2009 influenza season

*Notification data are provisional and were extracted from [CIDR](#) on the 28/10/2008 at 14.19

Baseline thresholds

A baseline threshold of 17.8 cases per 100,000 population will be used alongside expert opinion to assess influenza activity during the 2008/2009 influenza season in Ireland. This baseline was derived from the EISS method using a mathematical algorithm to identify the influenza activity period of the previous eight seasons.

Mortality Data

No influenza associated deaths registered with the GRO were reported to HPSC during week 43 2008.

Outbreak Reports

No ILI/influenza outbreaks were reported to HPSC during week 43 2008.

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. During week 42 2008, no increases in absenteeism were reported from sentinel schools. An increase in respiratory admissions was reported by a sentinel hospital in HSE-M during week 42 2008. During week 42 2008 sporadic influenza activity (based on isolated cases of ILI and influenza detections) was reported in five HSE-areas: HSE-ER, -MW, -NE, -NW and -W (figure 6).

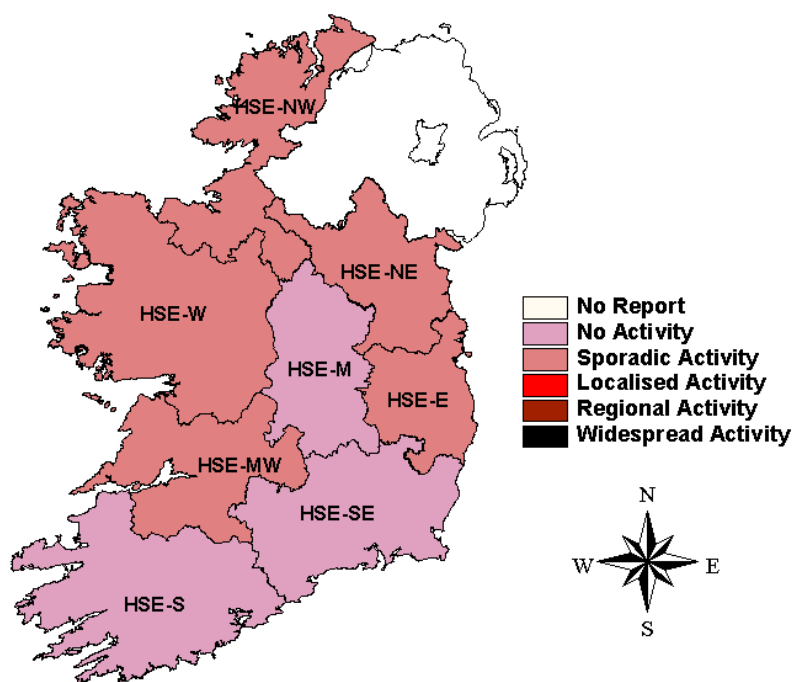


Figure 6: Map of influenza activity by HSE-Health Area during week 42 2008

Influenza Activity in Northern Ireland

During week 43 2008, five cases of clinical influenza and 26 ILI cases were reported in Northern Ireland, corresponding to a combined rate of 22.4 per 100,000 population, an increase compared to the updated rate of 17.3 per 100,000 for week 42 2008. Four sentinel specimens and 30 non-sentinel specimens were tested for influenza during week 43 2008 and none were positive for influenza. <http://www.cdscni.org.uk>

Influenza Activity in England, Scotland & Wales

Influenza activity remained stable at low levels across all the regions of the UK during week 43 2008. In England, ILI rates remained low at 7.8 per 100,000 population during week 43 2008, a slight increase from the rate of 6.9 per 100,000 population in week 42 2008 but well below the baseline activity threshold of 30 per 100,000 population. However, GPs reported an increased rate of ILI in the under one year old age group, at 21.5 per 100,000 population in week 43 2008 compared with nothing reported in the same age group in the previous three weeks. In Scotland, GP consultation rates for influenza were 9 per 100,000 population during week 43 2008, which remains stable compared to the rate of 9 per 100,000 population during week 42 2008. Activity remains below the Scottish baseline threshold of 50 consultations per 100 000 population. In Wales, GP consultation rates for influenza increased from 1.1 per 100 000 population during week 42 2008 to 2.1 per 100,000 in week 43 2008. Both figures are well below the baseline threshold of 25 consultations per 100,000 population. During week 43 2008, three influenza A (H1) and two influenza A(H3) tested positive from samples referred to the Centre for Infections' Respiratory Virus Unit (RVU). All three A(H1) were resistant to oseltamivir but sensitive to zanamivir and amantadine. Susceptibility testing was performed on six A(H3) isolates since week 36 2008 and all of them were sensitive to oseltamivir and zanamivir but resistant to amantadine. All three influenza B isolates received so far were sensitive to oseltamivir and zanamivir. Thirteen influenza A were detected in NHS and HPS laboratories in England and Wales during week 43 2008. Two outbreak reports of respiratory infections were received during week 44 2008 so far. One was reported from a care home in South East England and the other from a nursing home in East England. In the second outbreak five out six samples tested positive for influenza A.
http://www.hpa.org.uk/infections/topics%5Faz/influenza/seasonal/activity0809/weekly_summary.htm

Influenza Activity in Europe

Influenza surveillance data for Europe can be accessed at the following link:
<http://www.eiss.org/index.cgi>

Influenza Activity in Canada

Influenza surveillance data for Canada can be accessed at the following link:
<http://www.phac-aspc.gc.ca/fluwatch/index.html>

Influenza Activity in the United States

Influenza surveillance data for the United States can be accessed at the following link:
<http://www.cdc.gov/flu/weekly/fluactivity.htm>

Influenza Activity Worldwide

Global Influenza surveillance data can be accessed at the following link:
<http://gamapserver.who.int/GlobalAtlas/home.asp>

Avian Influenza

As of the 29th of October 2008, 387 confirmed human cases and 245 (63.3%) deaths from avian influenza A (H5N1) have been reported to the WHO from Azerbaijan, Bangladesh, Cambodia, China, Djibouti, Egypt, Indonesia, Iraq, Lao Peoples Democratic Republic, Myanmar, Nigeria, Pakistan, Thailand, Turkey and Viet Nam.

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 2008/2009 Season

The members of the WHO Collaborating Centres on Influenza have recommended that influenza vaccines for the 2008/2009 influenza season in the Northern Hemisphere contain the following strains:

- an A/Brisbane/59/2007 (H1N1)-like virus;
- an A/Brisbane/10/2007 (H3N2)-like virus;*
- a B/Florida/4/2006-like virus.#

* A/Brisbane/10/2007 is a current southern hemisphere vaccine virus.

B/Florida/4/2006 and B/Brisbane/3/2007 (a B/Florida/4/2006-like virus) are current southern hemisphere vaccine viruses. http://www.who.int/csr/disease/influenza/recommendations2008_9north/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 and Dr. Joan O'Donnell, HPSC