

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 51 2006 (18th to 24th December 2006)

Summary

During week 51 2006, influenza activity was at low levels in Ireland, with 15 influenza-like illness (ILI) cases reported by sentinel GPs. No specimens tested by the NVRL were positive for influenza virus during week 51.

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

Fifteen ILI cases were reported from sentinel GPs during week 51 2006, corresponding to an ILI consultation rate of 11.5 per 100,000 population, an increase from the updated rate of 7.5 in week 50 (figure 1).

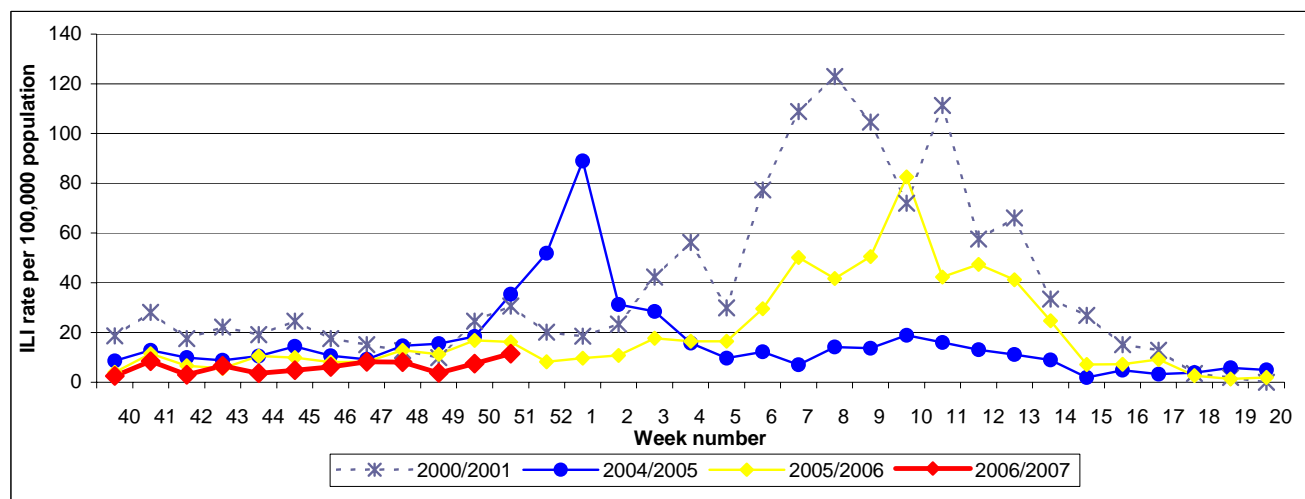


Figure 1: GP consultation rate for ILI per 100,000 population by week, during the 2000/2001*, 2004/2005, 2005/2006 & 2006/2007 influenza seasons.

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

Results (continued)

One case was in the 5-14 year age group (5.5 per 100,000 population), 12 cases were in the 15-64 year age group (13.6 per 100,000 population) and two cases were in the 65 years and older age group (13.8 per 100,000 population) as shown in figure 2. Thirty-eight of the 46 (82.6%) sentinel general practices reported during week 51 2006, with eight reporting ILI.

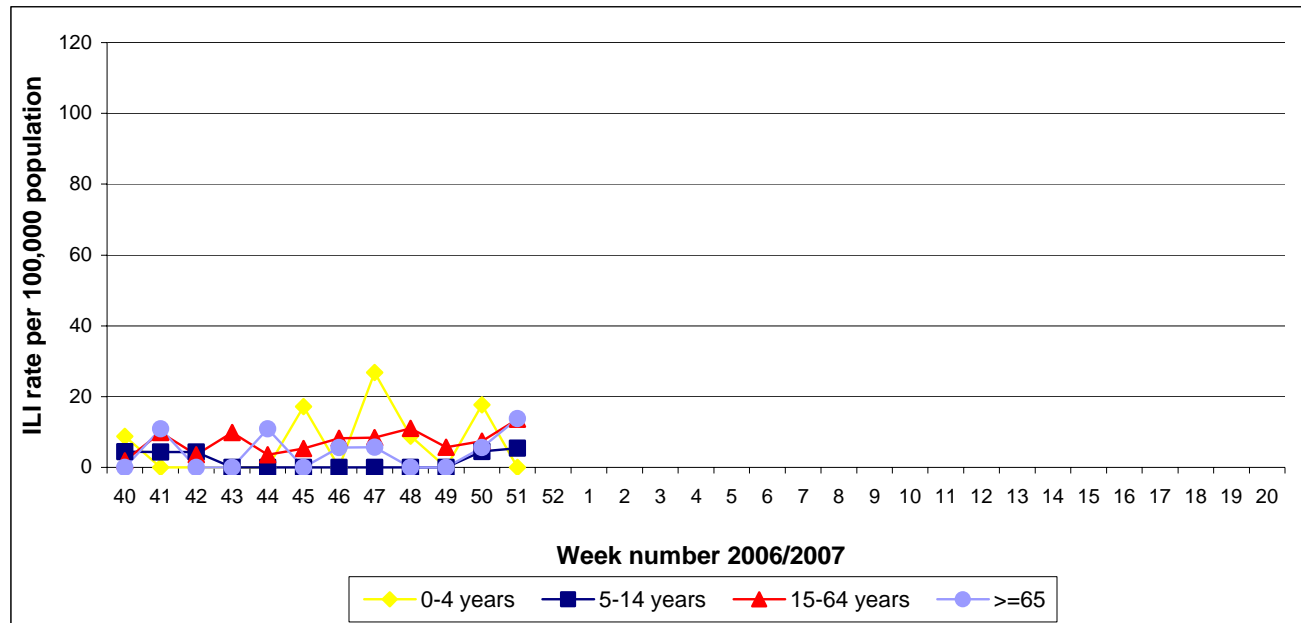


Figure 2: Age specific GP consultation rate* for ILI per 100,000 population by week during the 2006/2007 influenza season. *Please note the denominator used in the age specific consultation rate is from the 2002 census data; this assumes that the age distribution of the sentinel general practices is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

Virological Data from the National Virus Reference Laboratory (NVRL)

The NVRL tested seven specimens taken by sentinel GPs during week 51 2006, all of which were negative for influenza virus. The NVRL also tested 75 non-sentinel specimens taken during week 51 2006, mainly from hospitalised paediatric cases. Twenty-one 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 51 2006 and the 2006/2007 season to date

Week Number	Specimen Type	Total Specimens	No. Influenza Positive	% Influenza Positive	Influenza A	Influenza B	RSV
51 2006	Sentinel	7	0	0.0	0	0	NA
	Non-Sentinel	75	0	0.0	0	0	21
	Total	82	0	0.0	0	0	21
40-51 2006	Sentinel	66	1	1.5	1	0	NA
	Non-Sentinel	747	0	0.0	0	0	216
	Total	813	1	0.1	1	0	216

*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.

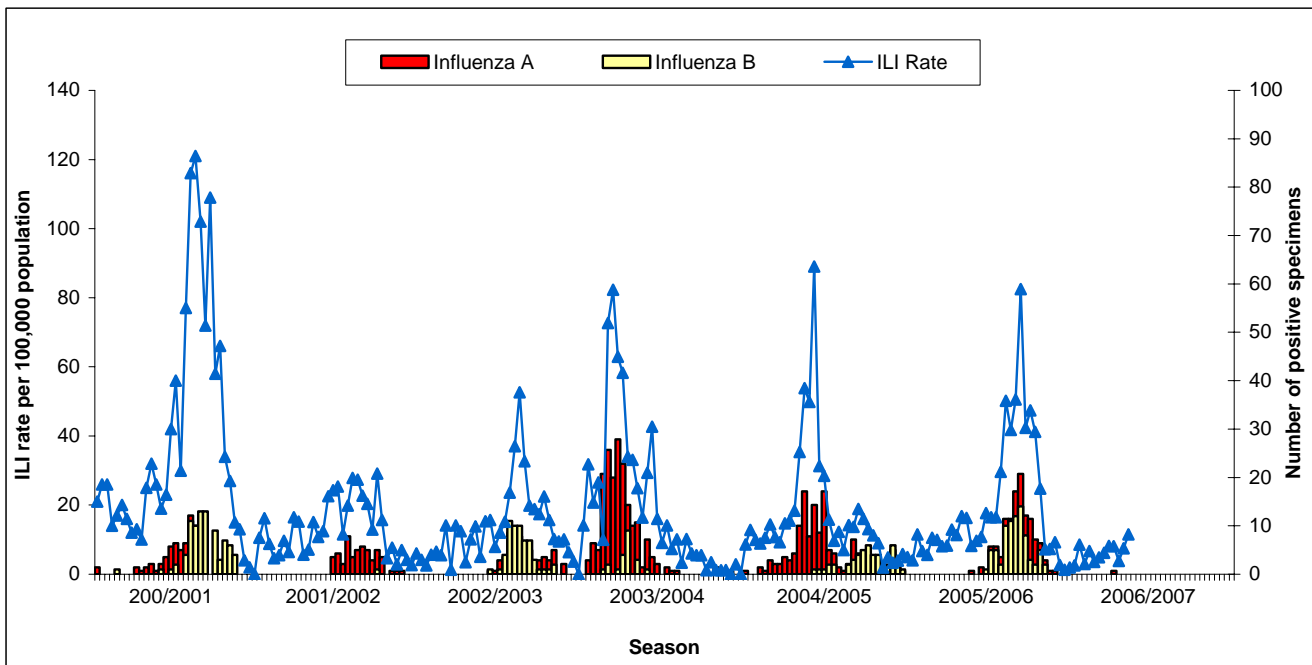


Figure 3: ILI rate per 100,000 population and the number of positive influenza specimens detected by the NVRL during the 2000/2001, 2001/2002, 2002/2003, 2003/2004, 2004/2005, 2005/2006 & 2006/2007 seasons.

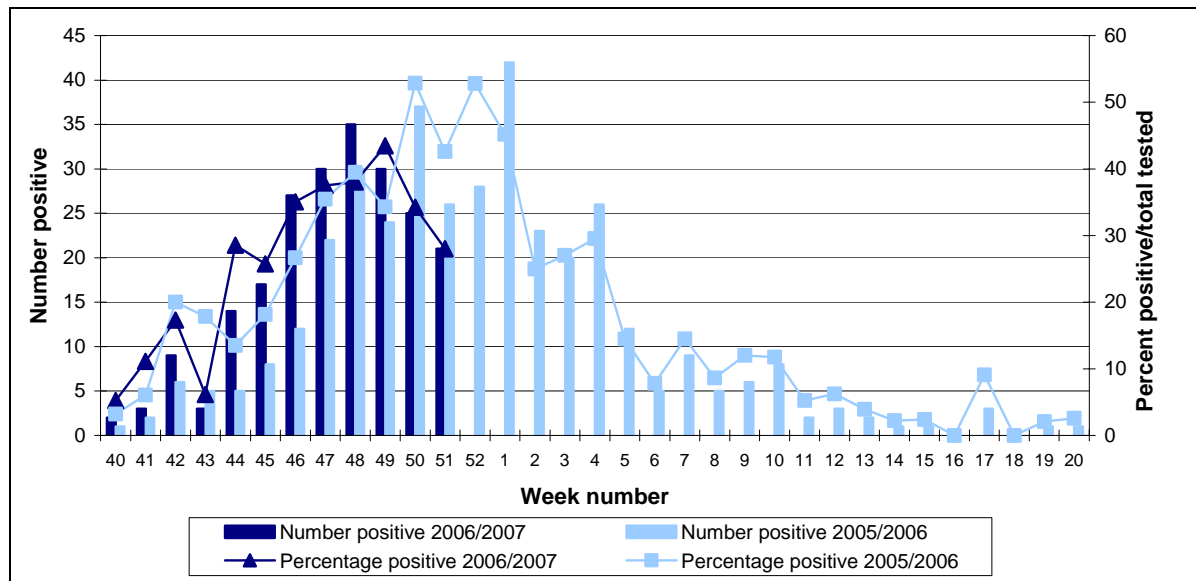


Figure 4. Number and percentage of non-sentinel RSV positive specimens detected during the 2005/2006 and 2006/2007 influenza seasons.

Weekly Influenza Notifications

One influenza A case in a 48 year old female was notified to HPSC during week 51 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.

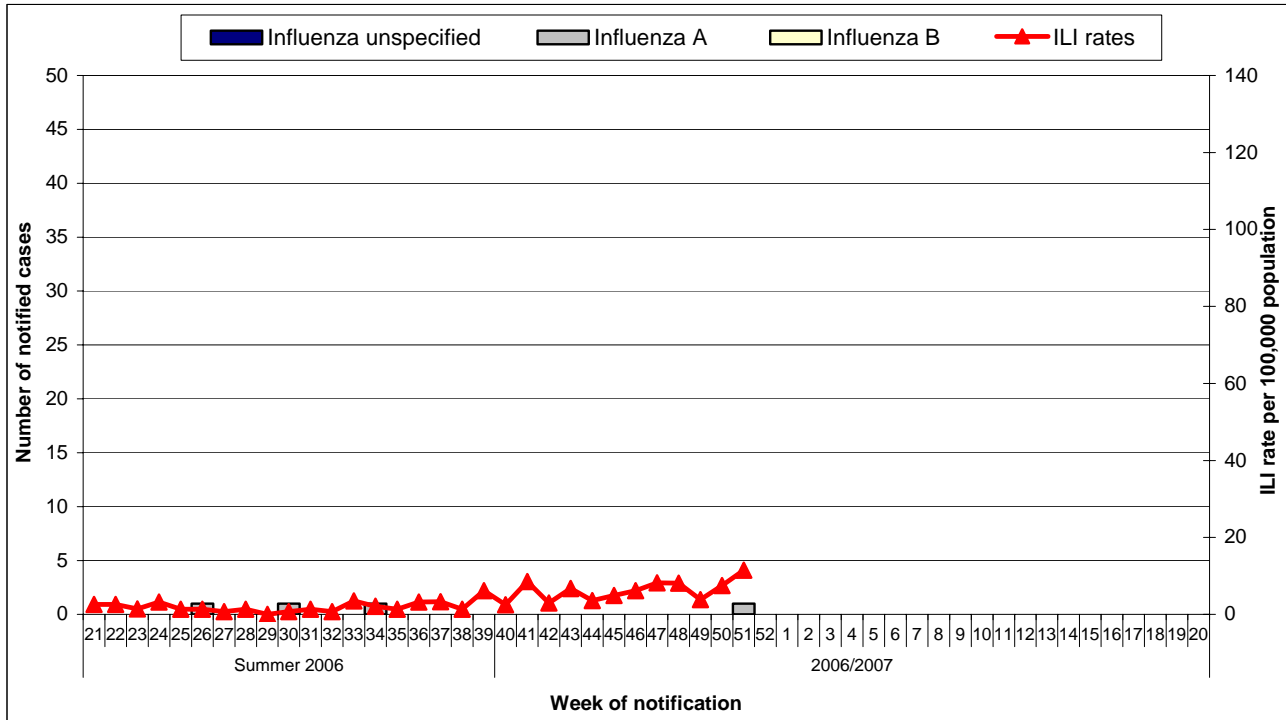


Figure 5: Number of notifications* of influenza (possible & confirmed) by type and by week of notification compared to sentinel GP ILI consultation rates per 100,000 population during the summer of 2006 and the 2006/2007 influenza season.

*Notification data are provisional and were extracted from [CIDR](#) on the 03/01/2007 at 14.21

Mortality Data

No deaths registered during week 51 2006 were attributed to influenza.

Outbreak Reports

No influenza/ILI outbreaks were reported to HPSC during week 51 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-ER, -MWA, -NEA, -SA and -SEA. No activity was reported from, HSE-MA, -NWA and -WA during week 50 2006 (figure 6). During week 50, sentinel schools in HSE-MA, -MW, -NW and -SE reported elevated levels of absenteeism.

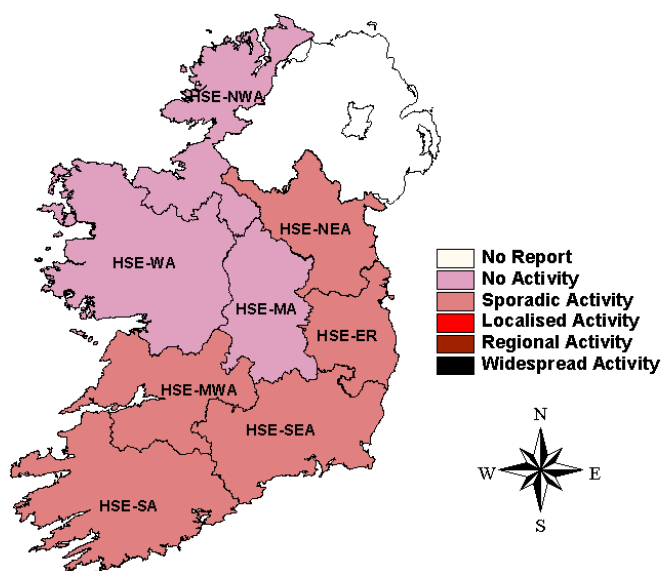


Figure 6: Map of influenza activity by HSE-Health Area during week 50 2006

Influenza Activity in Northern Ireland

Eighty-eight ILI cases and 33 cases of clinical influenza were reported from sentinel GPs in Northern Ireland during week 51 2006, corresponding to a combined rate of 120.1 per 100,000 population, an increase from the updated rate of 70.7 per 100,000 population during week 50. One influenza A unsubtype was detected during week 51 2006 in a hospitalised 5 month old baby co-infected with RSV. This is the second influenza detection of the season.

<http://www.cdscni.org.uk>

Influenza Activity in England, Scotland & Wales

Influenza activity remains low across the United Kingdom. Clinical indicators of influenza activity have remained stable in England but have increased in Scotland. Both are below clinical baseline thresholds. Clinical figures for Wales are unavailable for week 51. Reports of influenza A and B from NHS and HPA laboratories are also at low levels. Influenza was detected in a single community sample from southern England. This proved to be an influenza A(H3) subtype.

<http://www.hpa.org.uk/infections/topics%5Faz/influenza/seasonal/activity0607/flureport.htm>

Influenza Activity in Europe

During week 50 2006, national network levels of influenza-like illness (ILI) and/or acute respiratory infection (ARI) were at a low level in 25 countries. Regional data indicated sporadic activity in ten countries, meaning that isolated cases of laboratory confirmed influenza were detected, whilst 17 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 515, of which 20 (3.9%) were positive for influenza virus. Of these, 18 (90%) specimens tested positive for influenza A virus and 2 (10%) tested positive for influenza B virus. In addition, 38 specimens from non-sentinel sources (e.g. specimens collected for diagnostic purposes in hospitals) tested positive for influenza virus, of which 35 (92%) were influenza A and 3 (8%) influenza B. Of the 58 sentinel and non-sentinel specimens positive for influenza A virus, 4 were A(H1) and 5 were A(H3) and 44 were untyped. Based on subtyping data of all influenza virus detections (N=210; sentinel and non-sentinel data), 136 (65%) were A untyped, 11 (5%) were A(H1), three (1%) were A(H1N1), 25 (12%) were A(H3), 19 (9%) were A(H3N2) and 16 (8%) were B.

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

Influenza Activity in Canada

During week 50, overall influenza activity in Canada continued to increase. The proportion of laboratory detections, the number of regions reporting elevated activity, and the number of paediatric hospitalisations due to influenza increased from the previous week. Localised influenza activity was reported in all three influenza surveillance regions in Alberta and in the Central West 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 50, 7% (162/2,241) of the specimens tested for influenza virus were positive and all were influenza A viruses. Of the influenza virus detections to date this season, 99% (366/371) were influenza A viruses. The ILI consultation rate was 25 per 1,000 patient visits, which is slightly below the expected range for this week, and the sentinel response rate was 72%. During week 50, 18 new outbreaks of ILI were reported in schools in Alberta. The National Microbiology Laboratory (NML) has characterised 51 influenza viruses for the 2006-2007 influenza season: 20 were A/Wisconsin/67/05(H3N2)-like, 29 were A/New Caledonia/20/1999(H1N1)-like, 1 B/Malaysia/2506/2004-like, and 1 B/Shanghai/361/2002-like. All but the B/Shanghai/361/2002-like strain are included in the composition of the 2006-2007 Canadian influenza vaccine. Of the influenza A viruses characterised, 97% (28/29) of the A(H1N1) viruses were from the West and 95% (19/20) of the A(H3N2) viruses were from Ontario

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

Influenza Activity in the United States

During week 50, influenza activity increased in the United States. Among specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories for influenza, 8.0% were positive. Three states reported widespread influenza activity, nine states reported regional influenza activity, six states reported local influenza activity, 26 states, the District of Columbia, and New York City reported sporadic influenza activity and six states reported no influenza activity. The reporting of widespread or regional influenza activity increased from four states for week 49 to 12 states for week 50. On a national level, laboratory and outpatient influenza-like illness (ILI) surveillance data indicated an increase from week 49 to week 50 and ILI was above its baseline for the first time this season. However, the percent of deaths due to pneumonia and influenza remained below baseline level. During week 50, WHO and NREVSS laboratories reported 2,909 specimens tested for influenza viruses, 232 (8.0%) of which were positive: 39 influenza A (H1) viruses, one influenza A (H3), 152 influenza A viruses that were not subtyped and 40 influenza B viruses. Since October 1 2006, WHO and NREVSS laboratories have tested a total of 33,030 specimens for influenza viruses and 1,218 (3.7%) were positive. Among the 1,218 influenza viruses, 962 (79%) were influenza A viruses and 256 (21%) were influenza B viruses. Two hundred thirty-four (24%) of the 962 influenza A viruses have been subtyped: 222 (95%) were influenza A (H1) viruses and 12 (5%) were influenza A (H3) viruses. Of the 1,218 influenza positive tests reported this season, 503 (41%) have been reported from Florida.

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

Influenza Activity Worldwide

During week 50 2006 the following influenza isolates were reported; China 9 (3 A(H1), 4 A(H3) and 2 A untyped), Iran 3 B, Japan 2 (1 A(H3) and 1 B), Madagascar 2 (1 A(H3) and 1B), New Caledonia 3 A(H3) and Tunisia 4 (3 influenza unspecified and 1 B).

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

Avian Influenza

As of the 27th December 2006, 261 confirmed human cases and 157 (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.

The Egyptian Ministry of Health and Population has informed WHO of three new human cases of avian influenza A(H5N1) virus infection. All three cases belong to one extended family in Gharbiyah province, 80 kilometres northwest of the capital city, Cairo. While being transferred and cared for at the country's designated avian influenza hospital, a 30 year-old female, a 15 year-old girl and a 26 year-old male died. The most recent death occurred on 27 December. The cases reportedly had contact with sick poultry (ducks). Clinical specimens from the three cases were tested positive for avian influenza A(H5N1) virus by the Egyptian Central Public Health Laboratory. The virus was also detected in specimens from two of the three patients by the US Naval Medical Research Unit No.3 (NAMRU-3). The samples will be sent to a WHO Collaborating Centre for further testing including virus characterisation.

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