

# 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 2 2008 (7<sup>th</sup> – 13<sup>th</sup> January 2008)**

## Summary

During week 2 2008, GP consultation rates for influenza-like illness (ILI) decreased slightly, however remain at a higher level than normally observed at this time of year, with increases reported in those aged 0-14 years. Nine influenza positive specimens were detected by the NVRL during week 2 2008, the majority of which were influenza A.

## Background

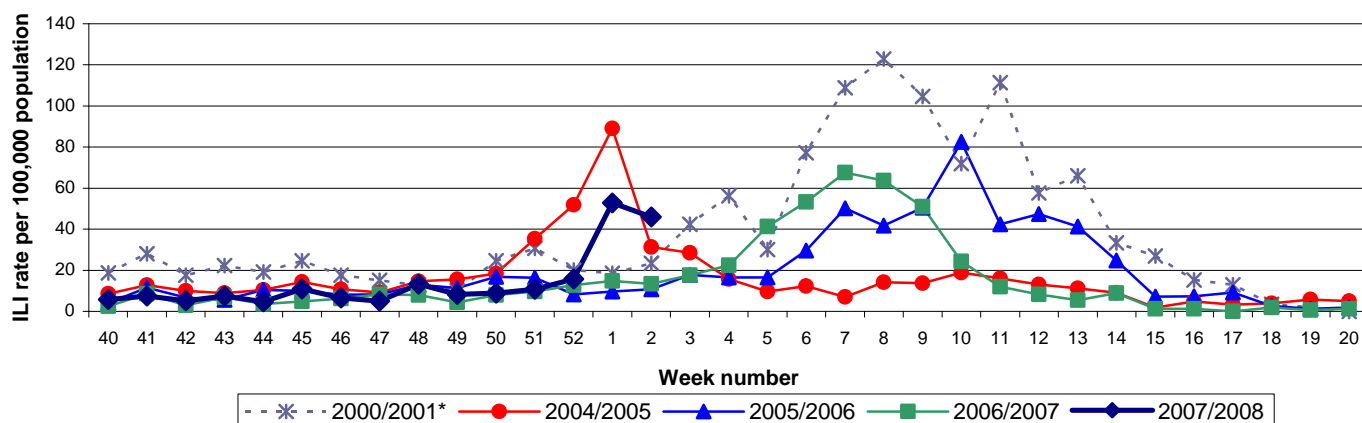
This is the eighth season of influenza surveillance using computerised sentinel general practices in Ireland. The Health Protection Surveillance Centre (HPSC) is working in collaboration with the Irish College of General Practitioners (ICGP), the National Virus Reference Laboratory (NVRL) and the Departments 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

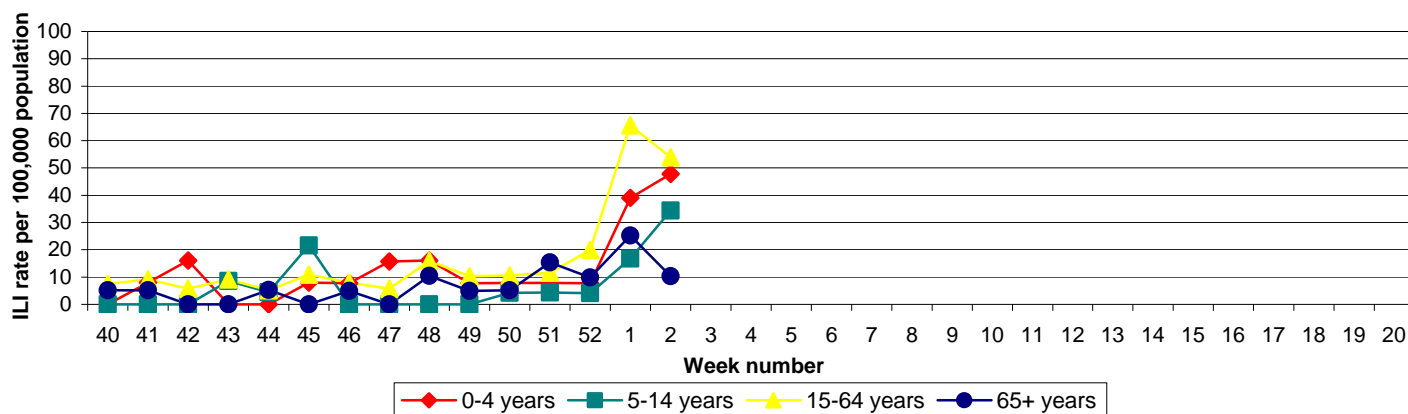
Sentinel GPs reported 81 ILI cases during week 2 2008, corresponding to ILI consultation rates of 46.0 per 100,000 population, a slight decrease from the updated rate of 52.8 per 100,000 in week 1 2008 (figure 1). ILI rates remain at a higher level than normally observed for this time of year (with the exception of the 2004/2005 season). Forty-seven (94.0%) sentinel practices reported during week 2 2008.



**Figure 1:** GP consultation rate for ILI per 100,000 population by week, during the 2000/2001\*, 2004/2005, 2005/2006, 2006/2007 & 2007/2008 influenza seasons \*Highest recorded levels of ILI activity since initiation of sentinel surveillance

## Results (continued)

During week 2 2008, ILI rates increased in those aged 0-14 years. For the last three weeks, the highest ILI rates have been in the 15-64 year age group. Six ILI cases were reported in the 0-4 year age group (47.8 per 100,000 population), eight cases in the 5-14 year age group (34.3 per 100,000 population), 65 cases in the 15-64 year age group (53.9 per 100,000 population) and two cases in those aged 65 year or older (10.3 per 1000,000 population) during week 2 2008, as shown in figure 2.



**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.

### **NEWS: Recommendations on the use of antiviral drugs**

The use of antiviral drugs for the prevention or treatment of influenza in at risk groups is now recommended, as per the National Institute of Clinical Excellence (NICE) guidelines, UK (2003). When ILI rates increase to levels observed during week 1 2008 and when influenza is known to be circulating in the community, it is recommended that antiviral drugs be used in at-risk groups. Further information on the use of antiviral neuraminidase inhibitors, oseltamivir and zanamivir for the treatment of influenza in at-risk groups and the NICE algorithm for prescribing oseltamivir for the prophylaxis of influenza are available on the HPSC website. <http://www.ndsc.ie/hpsc/>

### **Virological Data from the NVRL**

The NVRL tested 15 specimens taken by sentinel GPs during week 2 2008, five (33.3%) of which were positive for influenza: 3 A (unsubtyped) and 2 B. The NVRL also tested 78 non-sentinel specimens taken during week 2 2008, mainly from hospitalised paediatric cases, four (5.1%) of which were positive for influenza A and none were positive for influenza B. To date this season, 47 (3.8%) specimens have tested positive for influenza from sentinel and non-sentinel sources (n=1243): 36 A (unsubtyped), 1 A (H3) and 10 B viruses.

Twenty non-sentinel specimens were positive for respiratory syncytial virus (RSV) during week 2 2008 (table 1). NVRL detections of RSV from non-sentinel sources peaked during week 47 2007 (figure 4). To date this season, the NVRL has detected the following positive specimens from non-sentinel sources: 5 influenza A, 2 influenza B, 404 RSV, 5 Adenovirus, 2 parainfluenza virus (PIV) type-1, 1 PIV-2 and 8 PIV-3. Influenza positive specimens by HSE-Area and age group (in years) for the current week 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 reported by the NVRL for week 2 2008 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 |
|-----------------------|---------------|-----------------|------------------------|----------------------|-------------|-------------|------------|----------------|
| <b>2 2008</b>         | Sentinel      | 15              | 5                      | 33.3                 | 3           | 2           | -          | -              |
|                       | Non-Sentinel  | 78              | 4                      | 5.1                  | 4           | 0           | 20         | 25.6           |
|                       | <b>Total</b>  | <b>93</b>       | <b>9</b>               | <b>9.7</b>           | <b>7</b>    | <b>2</b>    | <b>20</b>  | <b>21.5</b>    |
| <b>Season to date</b> | Sentinel      | 145             | 40                     | 27.6                 | 32          | 8           | -          | -              |
|                       | Non-Sentinel  | 1098            | 7                      | 0.6                  | 5           | 2           | 404        | 36.8           |
|                       | <b>Total</b>  | <b>1243</b>     | <b>47</b>              | <b>3.8</b>           | <b>37</b>   | <b>10</b>   | <b>404</b> | <b>32.5</b>    |

\*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

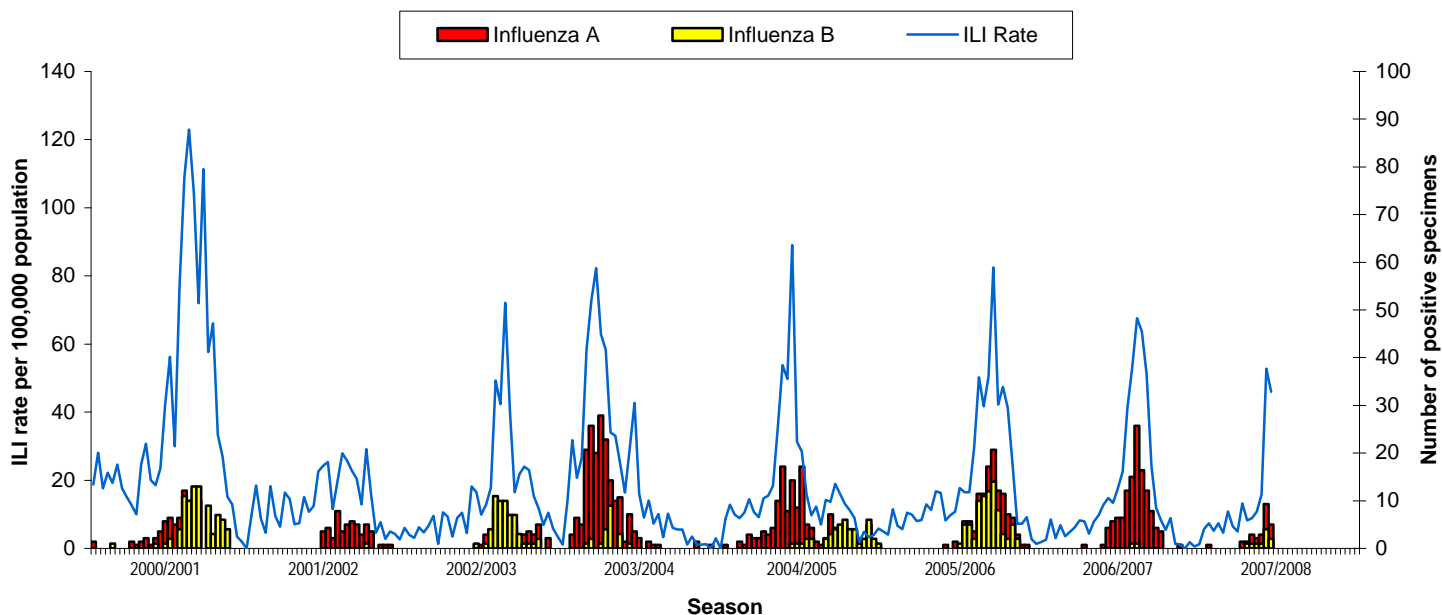
**Table 2:** Total number of sentinel and non-sentinel\* influenza A and B positive specimens by HSE-Area, reported by the NVRL for week 2 2008 and the 2007/2008 season to date

|              | Week 2 2008 |          |          | Season to date |           |           |
|--------------|-------------|----------|----------|----------------|-----------|-----------|
|              | Flu A       | Flu B    | Total    | Flu A          | Flu B     | Total     |
| HSE-E        | 4           | 1        | 5        | 10             | 4         | 14        |
| HSE-M        | 0           | 0        | 0        | 2              | 0         | 2         |
| HSE-MW       | 0           | 0        | 0        | 2              | 0         | 2         |
| HSE-NE       | 0           | 1        | 1        | 6              | 3         | 9         |
| HSE-NW       | 0           | 0        | 0        | 0              | 0         | 0         |
| HSE-SE       | 0           | 0        | 0        | 6              | 2         | 8         |
| HSE-S        | 1           | 0        | 1        | 9              | 0         | 9         |
| HSE-W        | 2           | 0        | 2        | 2              | 1         | 3         |
| <b>Total</b> | <b>7</b>    | <b>2</b> | <b>9</b> | <b>37</b>      | <b>10</b> | <b>47</b> |

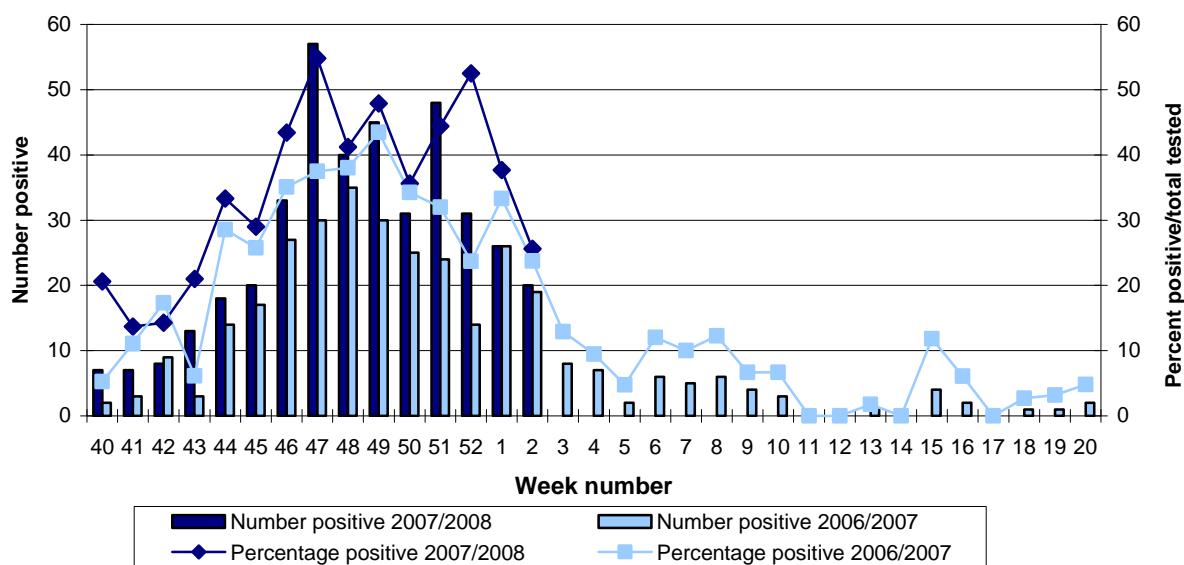
\* Please note that non-sentinel specimens include all specimens referred to the NVRL, these specimens are mainly from hospitals and some GPs and may include more than one specimen from each case

**Table 3:** Total number of sentinel and non-sentinel\* influenza A and B positive specimens by age group (in years) reported by the NVRL for week 2 2008 and the 2007/2008 season to date

|                           | Week 2 2008 |          |          | Season to date |           |           |
|---------------------------|-------------|----------|----------|----------------|-----------|-----------|
|                           | Flu A       | Flu B    | Total    | Flu A          | Flu B     | Total     |
| <b>0-4 years</b>          | 1           | 0        | 1        | 2              | 1         | 3         |
| <b>5-14 years</b>         | 0           | 0        | 0        | 3              | 0         | 3         |
| <b>15-64 years</b>        | 6           | 1        | 7        | 32             | 7         | 39        |
| <b>65 years and older</b> | 0           | 1        | 1        | 0              | 2         | 2         |
| <b>Age group unknown</b>  | 0           | 0        | 0        | 0              | 0         | 0         |
| <b>Total</b>              | <b>7</b>    | <b>2</b> | <b>9</b> | <b>37</b>      | <b>10</b> | <b>47</b> |



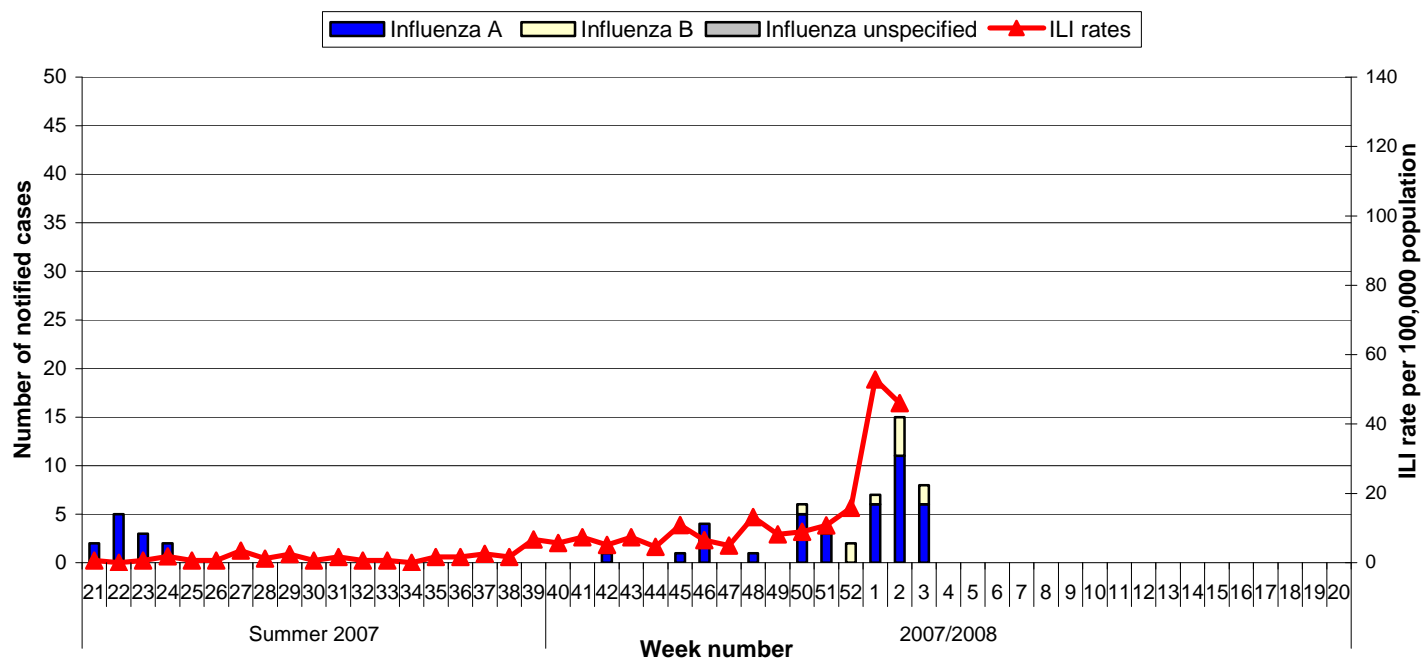
**Figure 3:** GP ILI consultation rate per 100,000 population and the number of positive influenza specimens detected by the NVRL by week and season, 2000/2001 - 2007/2008



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

### Weekly Influenza Notifications

Eleven influenza A and four influenza B cases were notified to HPSC during week 2 2008: four from HSE-E, two from HSE-M, three from HSE-NE, four from HSE-SE and two from HSE-S. Six influenza A and two influenza B cases were notified during week 3 2008: four from HSE-E, two from HSE-NE and two from HSE-S. 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 16/01/2008 at 15:08

#### **Mortality Data**

No influenza associated deaths were registered with the GRO and reported to HPSC to date this season.

#### **Outbreak Reports**

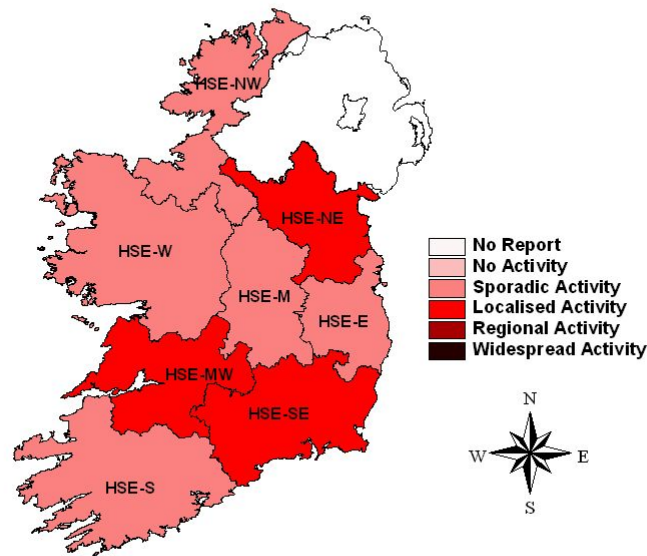
No ILI/influenza outbreaks have been reported to HPSC to date this season.

#### **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.

Increases in respiratory admissions reported in some sentinel hospitals during week 52 2007, were followed by a decrease during week 1 2008, with the exception of a sentinel hospital in HSE-M where respiratory admissions remained at similar levels to week 52 2007. The Christmas and New Year holiday period may have affected reporting from some sentinel hospitals. Schools were closed for weeks 52 2007 and 1 2008 and absenteeism data are not yet available for week 2 2008.

During week 1 2008, localised influenza activity was reported in three HSE-Areas, HSE-NE, -SE and -MW. Sporadic influenza activity was reported in the remaining five HSE-Areas during week 1 2008 (figure 6). Regional or widespread influenza activity has not been reported from any HSE-Area this season. To date this season, influenza positive specimens have been detected in all HSE-Areas, with the exception of HSE-NW.



**Figure 6:** Map of influenza activity by HSE area for week 1 2008

### ***Influenza Activity in Northern Ireland***

During week 2 2008, nine cases of clinical influenza and 87 ILI cases were reported in Northern Ireland, corresponding to a combined rate of 63.4 per 100,000 population, an increase from the updated rate of 44.7 per 100,000 for week 1 2008. Ninety-two non-sentinel specimens were tested during week 2 2008, one was positive for influenza A. <http://www.cdscni.org.uk>

### ***Influenza Activity in England, Scotland & Wales***

During week 2 2008, influenza activity increased in Scotland, and remained stable in England and Wales. Activity remained above baseline levels in England and has increased above baseline levels in Scotland and is below baseline in Wales. ILI episode incidence rates increased in England, from 30.2 per 100,000 population in week 1 2008 to 32.0 per 100,000 during week 2 2008. In Scotland, ILI consultation rates increased from 41.0 per 100,000 in week 1 2008 to 50 per 100,000 in week 2 2008. In Wales, GP ILI consultation rates decreased from 8.5 per 100,000 in week 1 2008 to 6.1 per 100,000 in week 2 2008. Of the samples referred to the Centre for Infections' Respiratory Virus Unit during week 2 2008, 34 tested positive for influenza A (H1), one for A (H3), four for B and one for RSV. <http://www.hpa.org.uk/infections/topics%5Faz/influenza/seasonal/flureports0708.htm>

### ***Influenza Activity in Europe***

Influenza activity is increasing in 16 European countries and a further increase in the coming weeks can be expected. During week 1 2008, increased influenza activity was reported in England, Ireland, Italy, Luxembourg, Slovenia, Spain and Switzerland. In France and Portugal levels of influenza activity are around the baseline threshold. All other countries reported low levels of influenza activity. England, Spain and Switzerland reported regional influenza activity; five countries local activity, 13 countries sporadic activity and five countries reported no influenza activity. The total number of respiratory specimens collected by sentinel physicians in week 1 2008 was 643, of which 143 (22%) were influenza virus positive; 44 (31%) A (unsubtyped), 79 (55%) A (H1), one (1%) A (H3) and 19 (13%) B. In addition, 187 influenza virus detections were reported from non-sentinel sources during week 1 2008, of which 130 (70%) were A (unsubtyped), 28 (15%) A (H1) and 29 (15%) B. Based on (sub)typing data of all influenza virus detections this season (N=1475; sentinel and non-sentinel data), 599 (41%) were A (unsubtyped), 588 (40%) were A (H1), 28 (2%) were A (H3) and 260 (17%) were B. Overall, for Europe as a whole, 82% of total virus detections this season (N=1475) have been influenza A, of which 95% were A (H1). Based on the antigenic and/or genetic characterisation of 268 influenza viruses, three were A/New Caledonia/20/99 (H1N1)-like, 216 were A/Solomon Island/3/2006 (H1N1)-like, two were A/Wisconsin/67/2005 (H3N2)-like, seven



were A/Brisbane/10/2007 (H3N2)-like, 24 were B/Florida/4/2006-like (B/Yamagata/16/88 lineage) and 16 were B/Malaysia/2506/2004-like (B/Victoria/2/87 lineage). The characterisation data reported to EISS this season indicate that there seems to be a good match between the circulating A (H1) virus and the corresponding vaccine strain A/Solomon Island/3/2006 which is included in the 2007/2008 vaccine. <http://www.eiss.org/index.cgi>

### ***Influenza Activity in Canada***

During week 1 2008, influenza activity levels in Canada remained fairly low overall; however all influenza indicators increased from the previous week. In week 1 2008, seven influenza surveillance regions reported localised influenza activity, while the rest reported either no activity or sporadic activity. In week 1 2008, 10.4% (271/2601) of the specimens tested were positive for influenza. Although both influenza A and B detections increased during week 1 2008 compared to the previous week, the percent positive for influenza detections increased at a much higher rate. Of the influenza detections to date, 79% were influenza A and 21% were influenza B. The ILI consultation rate rose slightly to 32 per 1,000 patient visits, which is within the expected range for this week. Based on antigenic characterisation of 118 viruses, 80 were A/Solomon Islands/3/2006 (H1N1)-like, five were A/Wisconsin/67/2005 (H3N2)-like, four were A/Brisbane/10/2007 (H3N2)-like, three were B/Malaysia/2506/2004-like and 26 were B/Florida/4/2006-like. <http://www.phac-aspc.gc.ca/fluwatch/index.html>

### ***Influenza Activity in the United States***

During week 1 2008, influenza activity continued to increase in the United States. The proportion of outpatient visits for ILI was below national baseline levels and the proportion of outpatient visits for ARI was above national baseline levels. One state reported widespread influenza activity; 10 states reported regional influenza activity; 12 states and the District of Columbia reported localised influenza activity; 26 states and Puerto Rico reported sporadic influenza activity; and one state reported no influenza activity. During week 1 2008, WHO and NREVSS laboratories reported 3,066 specimens tested for influenza viruses, 221 (7.2%) of which were positive: 29 A (H1), 12 A (H3), 133 A (unsubtyped) and 47 B. It is too early in the influenza season to determine which influenza viruses will predominate or how well the vaccine and circulating strains will match.

<http://www.cdc.gov/flu/weekly/fluactivity.htm>

### ***Influenza Activity Worldwide***

During week 1 2008, localised influenza activity was reported in Tunisia (1 A H3), sporadic activity was reported in China (2 A unsubtyped, 2 A H1, 24 A H3 and 39 B) and Israel (1 A unsubtyped, 2 A H1 and 5 B) and no influenza activity was reported in South Africa and Sri Lanka. Four influenza A (H1) and one influenza B virus detections were reported from Iran during week 1 2008. <http://gamapserver.who.int/GlobalAtlas/home.asp>

### ***Avian Influenza***

As of January 15<sup>th</sup> 2008, 350 confirmed human cases and 217 (62.0%) deaths from avian influenza A (H5N1) have been reported to the WHO from Azerbaijan, Cambodia, China, Djibouti, Egypt, Indonesia, Iraq, Lao Peoples Democratic Republic, Myanmar, Nigeria, Pakistan, Thailand, Turkey and Viet Nam. The Ministry of Health of Indonesia has announced a new case of human infection of H5N1 avian influenza. A 32-year-old female from Banten Province developed symptoms on January 3<sup>rd</sup> 2008 and died on January 10<sup>th</sup> 2008. Investigations indicate the case had a history of close contact with birds and poultry in the week prior to her onset of symptoms. Of the 118 cases confirmed to date in Indonesia, 95 have been fatal.

WHO [http://www.who.int/csr/disease/avian\\_influenza/en/](http://www.who.int/csr/disease/avian_influenza/en/)

HPSC <http://www.ndsc.ie/hpsc/A-Z/Respiratory/Influenza/AvianInfluenza/>

ECDC <http://www.ecdc.eu.int/>

HPA [http://www.hpa.org.uk/infections/topics\\_az/influenza/avian/default.htm](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<sup>a</sup>
- a B/Malaysia/2506/2004-like virus

Candidate vaccine viruses include:

- <sup>a</sup>A/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**