Weekly Influenza Surveillance Report

Week 51 2004

Week starting Monday 13th December 2004 &
ending Sunday 19th December 2004

Report produced: 23/12/2004

This report is produced in collaboration with the Departments of Public Health

Summary
During week 51 2004, influenza activity in Ireland remained within baseline levels although showed an increase from previous weeks. The influenza-like illness (ILI) rate of 35.8 cases per 100,000 population is higher than the updated rate of 17.8 per 100,000 for week 50. To date this season, 13 influenza A (H1N1), two influenza A (H3N2) and 26 influenza A (unsubtyped) viruses have been detected. RSV levels increased slightly in week 51. Thirty-six non-sentinel specimens and one sentinel specimen tested positive for RSV in week 51, an increase on the 36 positive specimens in week 50.

Clinical data
During week 51 (week ending 19th December 2004), 33 cases of ILI were reported by sentinel general practices, corresponding to an ILI consultation rate of 35.8 per 100,000 population (figure 1). This is an increase from the updated rate of 17.8 per 100,000 for week 50.

Two ILI cases were in the 0-4 age group, two were in the 5-14 age group and 29 were in the 15-64 age group (figure 2). The rate of ILI cases in the 15-64 age group has increased over the last six weeks.

Returns were received from 30 out of 35 sentinel GP practices, giving a population coverage of 2.4% (86.0% of the total possible reporting GP patient population). Fourteen practices reported ILI.

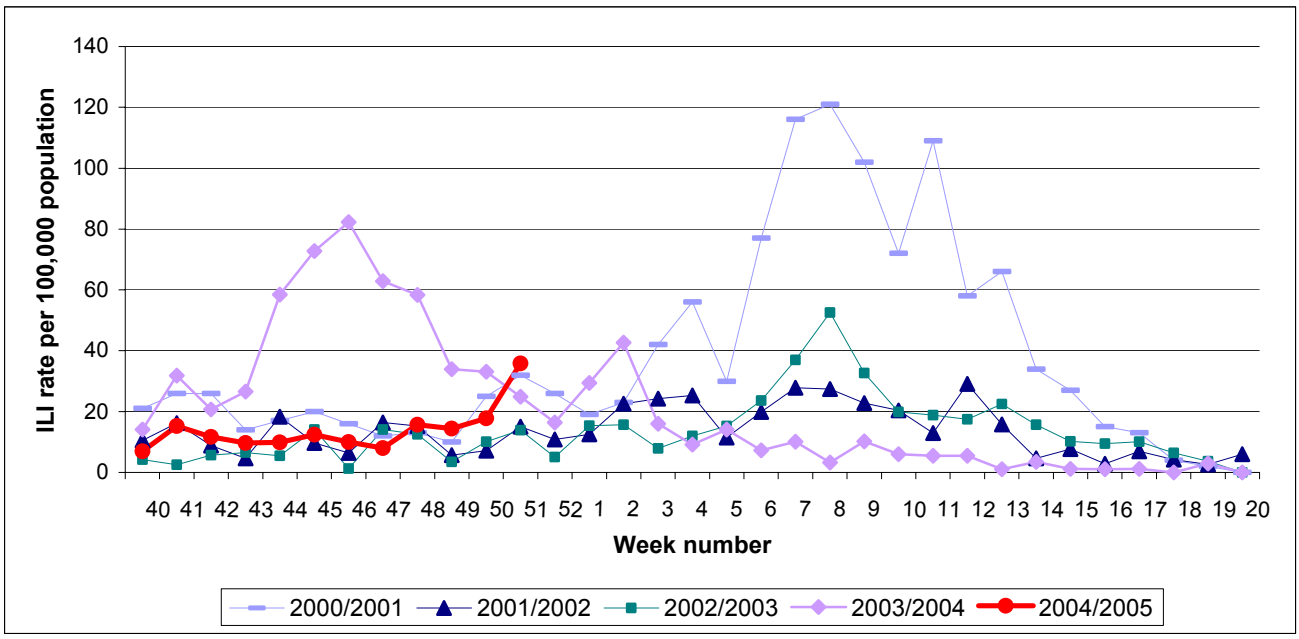

Figure 1. GP consultation rate for ILI per 100,000 population by week, during the 2000/2001, 2001/2002, 2002/2003, 2003/2004 & 2004/2005-influenza seasons.

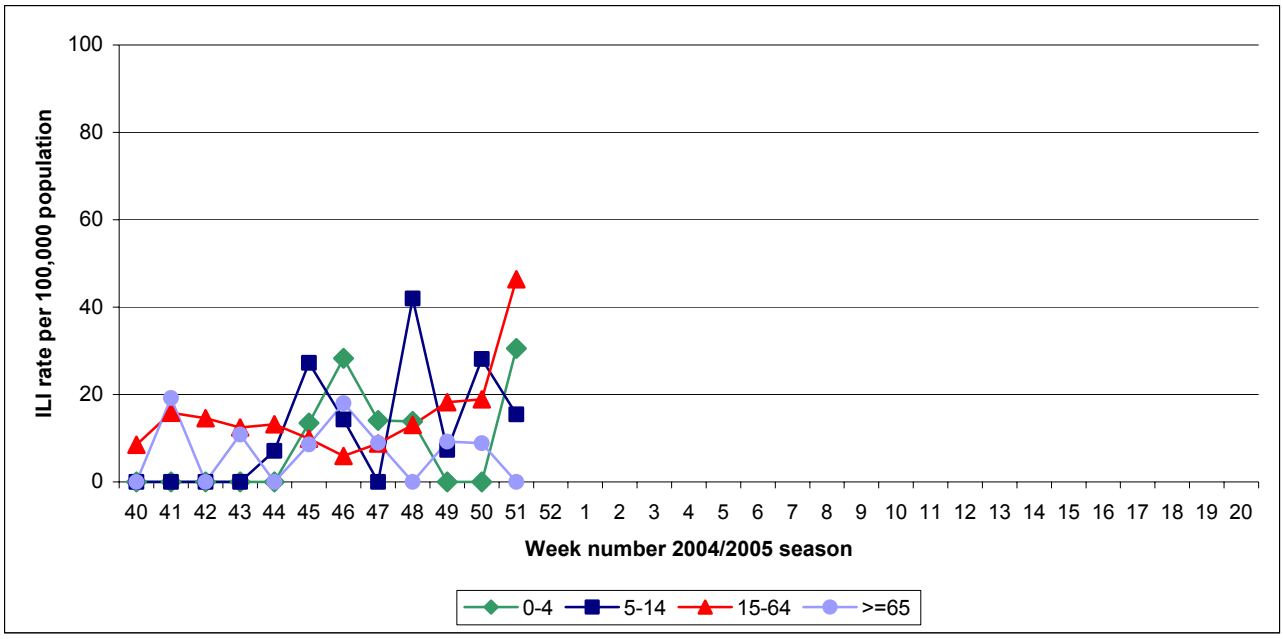

Figure 2. Age specific GP consultation rate* for ILI per 100,000 population by week for the 2004/2005-influenza season

** 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

During week 51 the National Virus Reference Laboratory (NVRL) received 25 swabs from sentinel GPs. Eleven were positive for influenza A (unsubtyped). There was one RSV positive (tables 1&3). The NVRL also tested 70 respiratory non-sentinel specimens from hospitals during week 51. One specimen tested positive for influenza A (unsubtyped) and 36 were positive for RSV (tables 2&3, figure 3). During weeks 43-51, the percentage of RSV positive specimens has been noticeably higher than the percentages during the same period in the 2003/2004 season (figure 3).

To date this season, 13 influenza A (H1N1), two influenza A (H3N2) and 26 influenza A (unsubtyped) viruses have been detected (table 3). Six of these were in the 0-4 age group, eleven were in the 5-14 age group, 22 were in the 15-64 age group and two were aged over 64 years. Of the 202 RSV detections to date, 107 were aged 6 months or less, 60 were aged between 7 and 12 months, 27 were aged between 1 and 4 years, and six were aged 5 years or more. Ages were unavailable for two of the positive RSV patients.

Antigenic characterisation

Two specimens have been characterised to date this season. One influenza A (H1N1) isolate has been antigenically characterised as A/New Caledonia/20/99-like. The current season's vaccine contains an A/New Caledonia/20/99(H1N1)-like virus and should provide good protection against the strain. One influenza A (H3N2) isolate was found to be closest in antigenic character to the reference viruses A/Shantou/1219/04 and A/Oslo/807/04. The current vaccine will protect against these strains.

Table 1: Total number of sentinel specimens tested for influenza and positive results by type and subtype for week 51 and for the 2004/2005 season to date

Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A (Unsubtyped)	Influenza A (H3N2)	Influenza A (H1N1)	Influenza B	RSV
51	25	11	44.0	11	0	0	0	1
Total	120	32	26.7	19	1	12	0	5

Table 2: Total number non-sentinel* respiratory specimens and positive results by type and subtype for week 51 and for the 2004/2005 season to date

Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A (Unsubtyped)	Influenza A (H3N2)	Influenza A (H1N1)	Influenza B	RSV
51	70	1	1.4	1	0	0	0	36
Total	542	9	1.7	7	1	1	0	197

* 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* respiratory specimens and positive results for week 51 and the 2004/2005 season to date

Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A (Unsubtyped)	Influenza A (H3N2)	Influenza A (H1N1)	Influenza B	RSV
51	95	12	12.6	12	0	0	0	37
Total	662	41	6.2	26	2	13	0	202

* 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 4: Total number of sentinel and non-sentinel* influenza A and B positive specimens by health board for week 51 and the 2004/2005 season to date

	Week 51 2004			Season to date		
	Flu A	**Flu B**	**Total**	**Flu A**	**Flu B**	**Total**
ERHA	1	0	1	6	0	**6**
MHB	0	0	0	1	0	**1**
MWHB	0	0	0	7	0	**7**
NEHB	1	0	1	2	0	**2**
NWHB	1	0	1	4	0	**4**
SEHB	4	0	4	8	0	**8**
SHB	1	0	1	8	0	**8**
WHB	4	0	4	5	0	**5**
Total	**12**	**0**	**12**	**41**	**0**	**41**

** 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.*

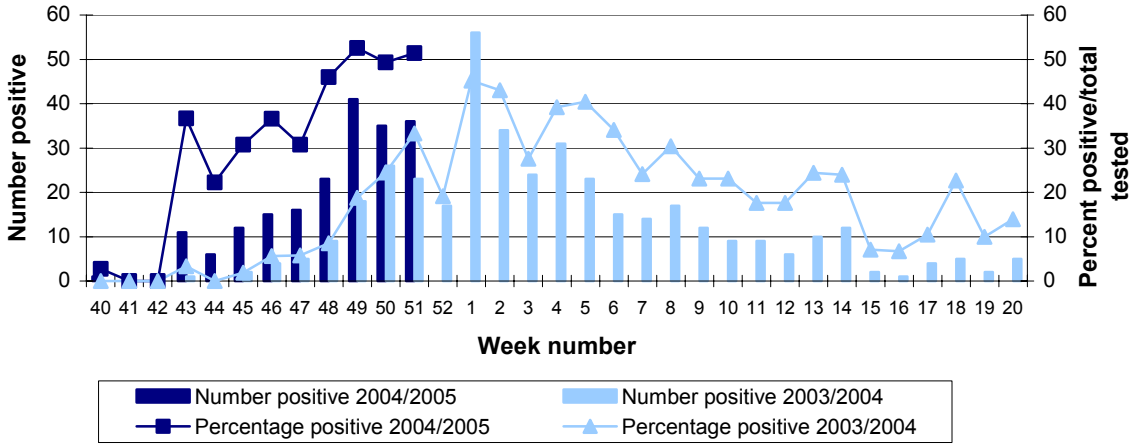

Figure 3. Number and percentage of non-sentinel RSV positive specimens detected during the 2004/2005 and 2003/2004 influenza seasons.

School outbreak reports

A school outbreak of influenza-like illness occurred during week 48 in the MWHB. A total of 32 pupils were reported ill. There were no hospitalisations. Influenza A (unsubtyped) was isolated from two cases. This is the only school outbreak reported this season.

Influenza activity by health board/authority

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 cases of influenza, sentinel hospital admissions data and/or sentinel school absenteeism data. During week 50, seven health boards reported sporadic activity and one health board reported no activity.

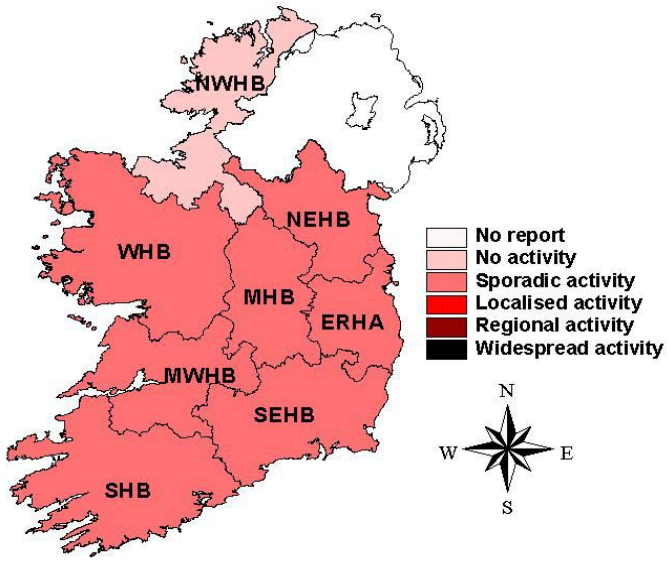

Figure 4: Map of influenza activity by health board/authority during week 50 2004/5

Influenza activity in Northern Ireland
Influenza activity levels decreased in Northern Ireland during week 51. One case of clinical influenza and 104 cases of ILI were reported. These figures correspond to rates of 0.8 per population for clinical influenza and 78.5 per 100,000 population for ILI which are lower than the updated rates from week 50 (6.0 per 100,000 and 89.9 per 100,000 respectively). Returns were received from 22 out of 24 sentinel GP practices, giving a population coverage of 7.8%. At time of writing, no sentinel swabs had tested positive for influenza although the results of six swabs were awaited. There were 2 influenza A positives in hospitalised children during week 51.
http://www.cdscni.org.uk//

Influenza activity in England, Scotland and Wales
Influenza-like illness consultation rates in England, Scotland and Wales have increased but remain within baseline levels. Week 51 ILI rates in England (19.9 cases per 100,000 population) and Scotland (25 per 100,000) showed an increase on the rates in week 50 (15 per 100,000 and 21 per 100,000 respectively). The week 51 ILI rate in Wales was 0.92 per 100,000. There were 13 influenza A (H3) detections from non-sentinel sources in Britain during weeks 50 and 51. Two influenza viruses have been characterised this season to date, one travel associated influenza A/Wellington//1/2004(H3N2)-like virus and one influenza A/New Caledonia/20/99 (H1N1)-like virus.

RSV levels continued to increase, especially among children in the 0-4 age group. During week 50 there were two outbreaks of respiratory illness reported in southern England, one in a school and one in a nursing home for the elderly. Laboratory analysis of specimens from these outbreaks detected influenza A (H3) in three samples from the school outbreak and RSV A in two samples from the nursing home. During weeks 49 and 50 three deaths attributable to influenza were registered, all three were females in the 75-84 age group.
http://www.show.scot.nhs.uk/scieh/infectious/respiratory/influenzasurveillance/influenzasurveillance.htm
http://www.hpa.org.uk/infections/topics_az/influenza/flu.htm

Influenza activity in Europe
Influenza activity remained low in Europe during week 50, although the number of countries reporting sporadic activity increased from eleven to thirteen. All other countries reported no activity. Twenty-one (4.7%) of the 446 sentinel swabs collected tested positive for influenza as did 33 non-sentinel swabs. Of the 54 positives, there were 46 influenza A and eight influenza B. Ten influenza A specimens were subtyped, two were H1 (one of these was A(H1N1)) and eight were H3 (one of these was A(H3N2)).

RSV levels decreased in England, France, Ireland and Wales during week 50 although RSV incidence is increasing in a number of other countries.

Fifteen influenza viruses have been antigenically and/or genetically characterised in Europe since week 40 2004. Of these, there were eight A/Wellington/1/2004 (H3N2)-like, one A/Fujian/411/2002 (H3N2)-like, five A/New Caledonia/20/99 (H1N1)-like and one B/Jiangsu/10/2003-like.

To date this season, influenza A (H3N2), influenza A (H1N1) and influenza B have been detected in Europe. The number of isolates subtyped and antigenically characterised is still too low to determine which virus variant will become the predominant strain in Europe this season. Of the 186 influenza A positive samples in weeks 40-49, 85 were influenza A

unsubtyped, 15 were A(H1), 12 were A(H1N1), 28 were A(H3) and 17 were A(H3N2). Twenty-nine specimens tested positive for influenza B in the weeks prior to week 50.
http://www.eiss.org/

Influenza activity in Canada
During week 50 (week ending 11/12/2004), sporadic activity was reported in four provinces: British Columbia, Saskatchewan, Quebec and Nova Scotia. Alberta, Manitoba and Ontario reported a mix of localised and sporadic activity. An increase in laboratory-confirmed influenza was reported in Alberta and Quebec. Elsewhere in Canada reported no activity. There were 81 influenza A detections and one influenza B detection in week 50. Since the start of the 2004/2005 influenza season, 81 influenza viruses have been antigenically characterised. Seventy-nine were influenza A/Fujian/411/02(H3N2)-like and two were influenza B/Shanghai/361/02-like, both of which are covered by the current vaccine. To date this season, there have been a total of 21 influenza outbreaks, of which 13 occurred in retirement homes, three in hospitals and five in schools.
http://www.phac-aspc.gc.ca/fluwatch/index.html

Influenza activity in the United States
Influenza activity remained low in the US during week 49 (week ending 11/12/2004). The proportion of ILI patient visits to sentinel providers (1.8%) was below the national baseline (2.5%). New York reported widespread influenza activity during week 49. Two states and New York City reported regional activity and five states reported local activity. Thirty-eight states, the District of Columbia and Puerto Rico reported sporadic influenza activity and four states reported no influenza activity. WHO and NREVSS laboratories tested 1,784 specimens for influenza during week 49. Eighteen were positive for influenza A (H3N2), 26 were positive for influenza A (unsubtyped) and eleven were positive for influenza B. Since October 1st, 42 influenza A (H3N2) and ten influenza B viruses have been antigenically characterised by the CDC. All of the influenza A viruses were influenza A/Fujian/411/2002-like and all of the influenza B viruses were influenza B/Shanghai/361/02-like.
http://www.cdc.gov/flu/weekly/

Influenza activity Worldwide
Ukraine, Mexico (four cases of influenza B isolated) and China (one influenza A (H3) and one influenza B) all reported sporadic influenza activity during week 51.
http://rhone.b3e.jussieu.fr/flunet/www/

Avian influenza
There have been no new human cases of avian influenza reported by Thailand or Viet Nam this week. Since the beginning of 2004, Thailand and Viet Nam have reported 44 laboratory confirmed cases of human infection with avian influenza A (H5N1). Thirty-two of these were fatal. Although the avian influenza virus is highly pathogenic in humans, there is no evidence of efficient and sustained human-to-human transmission. For further information on the avian influenza outbreaks please consult the following websites:
NDSC: http://www.ndsc.ie/DiseaseTopicsA-Z/AvianInfluenza/
WHO: http://www.who.int/csr/disease/avian_influenza/en/

Northern Hemisphere influenza vaccine for the 2004/2005
The WHO has published its recommendations on the composition of influenza vaccines for use in the 2004-2005 Northern Hemisphere influenza season.

- an A/New Caledonia/20/99(H1N1)-like virus
- an A/Fujian/411/2002(H3N2)-like virus[a]
- a B/Shanghai/361/2002-like virus[b]

[a] *The currently used vaccine virus is A/Wyoming/3/2003. A /Kumamoto/102/2002 is also available as a vaccine virus.*
[b] *Candidate vaccine viruses include B/Shanghai/361/2002 and B/Jilin/20/2003, which is a B/Shanghai/361/2002-like virus.*
http://www.who.int/csr/disease/influenza/vaccinerecommendations1/en/
www.emea.eu.int

Weekly influenza reports and further information on influenza are available on the NDSC website:
http://www.ndsc.ie/Publications/InfluenzaWeeklySurveillanceReport/
http://www.ndsc.ie/DiseaseTopicsA-Z/InfluenzaFlu/