Weekly Influenza Surveillance Report

Week 52 2004

Week starting Monday 20th December 2004 &
ending Sunday 26th December 2004

Report produced: 05/01/2005

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

Summary
During week 52 2004, influenza activity in Ireland showed an increase from previous weeks. The influenza-like illness (ILI) rate of 45.2 cases per 100,000 population is higher than the rate of 35.8 per 100,000 in week 51. To date this season, 13 influenza A (H1N1), two influenza A (H3N2) and 47 influenza A (unsubtyped) viruses have been detected. RSV levels decreased slightly in week 52. Twenty-seven non-sentinel specimens tested positive for RSV in week 52, a decrease on the 37 positive specimens in week 51.

Clinical data
During week 52 (week ending 26th December 2004), 44 cases of ILI were reported by sentinel general practices, corresponding to an ILI consultation rate of 45.2 per 100,000 population (figure 1). This is an increase from the rate of 35.8 per 100,000 for week 51.

One ILI case was in the 0-4 age group, five were in the 5-14 age group, 37 were in the 15-64 age group and one was in the 65+ age group(figure 2). An increase in the rate of ILI cases in the 15-64 age group has been noted over the last seven weeks.

Returns were received from 31 out of 35 sentinel GP practices, giving a population coverage of 2.5% (90.8% of the total possible reporting GP patient population). Seventeen practices reported ILI.

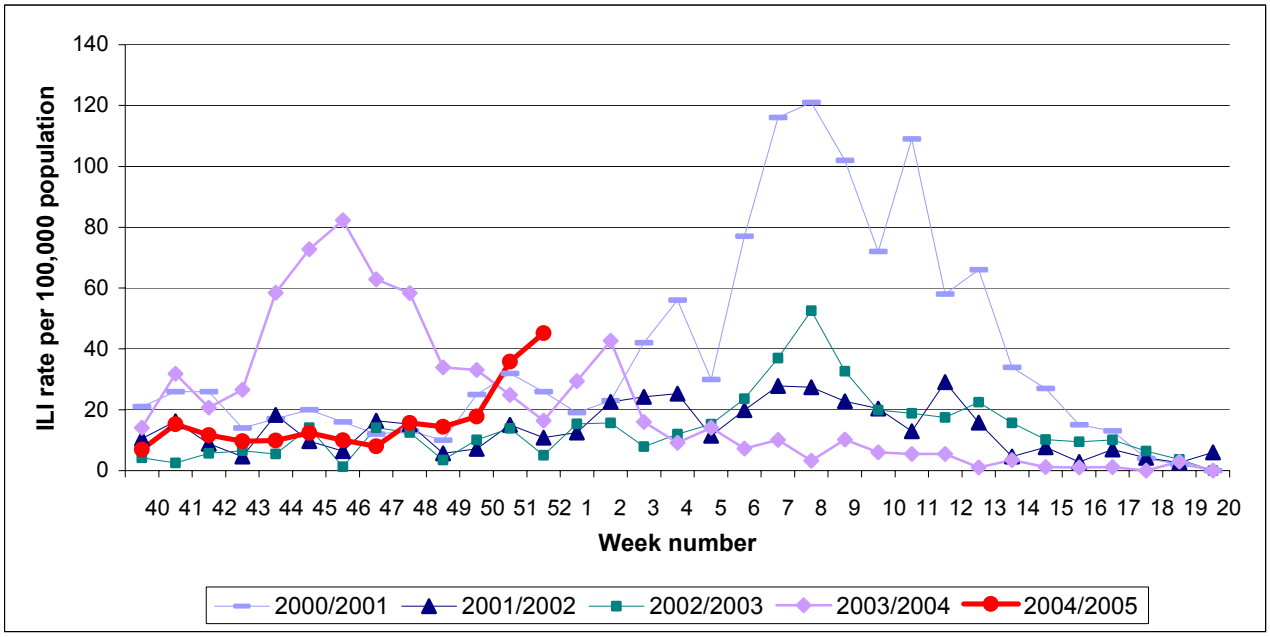

Figure 1. GP consultation rate for ILI per 100,000 population by week, during the 2000/2001, 2001/2002, 2002/2003, 2003/2004 & 2004/2005-influenza seasons.

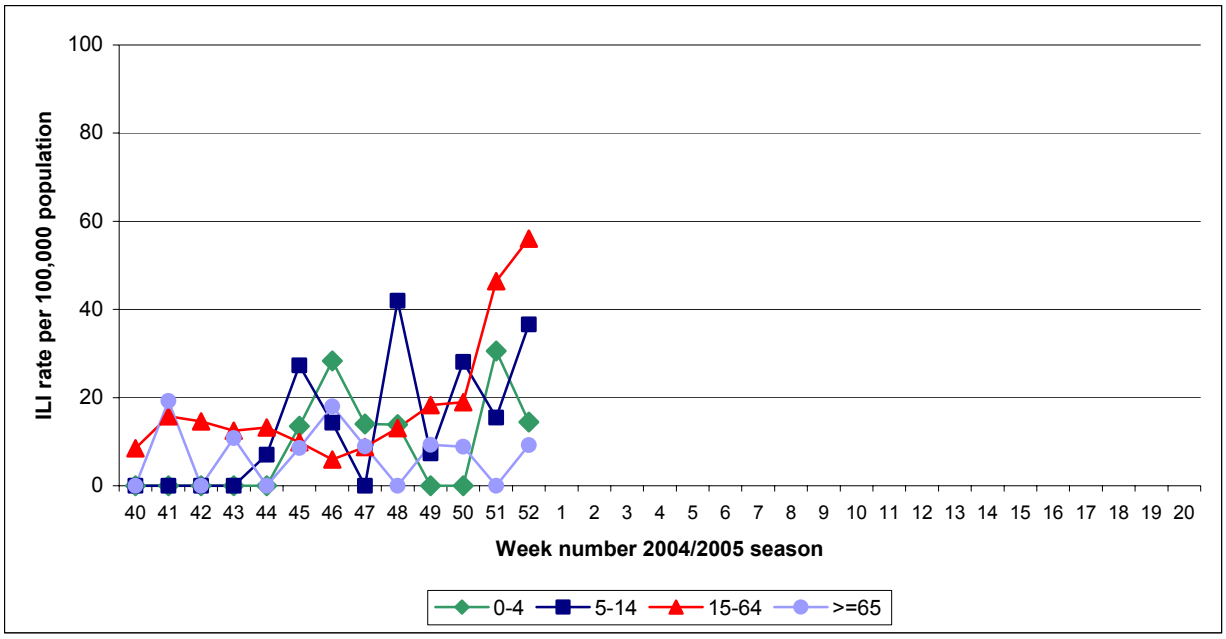

Figure 2. Age specific GP consultation rate* for ILI per 100,000 population by week for the 2004/2005-influenza season

** 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

The National Virus Reference Laboratory (NVRL) received 22 swabs taken during week 52 by sentinel GPs. Fifteen were positive for influenza A (unsubtyped). There were no RSV positives (tables 1&3). The NVRL also tested 60 respiratory non-sentinel specimens taken in hospitals during week 52. Four specimens tested positive for influenza A (unsubtyped) and 27 were positive for RSV (tables 2&3, figure 3). During weeks 43-52, 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 47 influenza A (unsubtyped) viruses have been detected (table 3). Ten of these were in the 0-4 age group, 13 were in the 5-14 age group, 36 were in the 15-64 age group and two were aged over 64 years. Of the 229 RSV detections to date, 126 were aged 6 months or less, 63 were aged between 7 and 12 months, 28 were aged between 1 and 4 years, and seven were aged 5 years or more. Ages were unavailable for five of the positive RSV patients and one of the influenza positive 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 52 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
52	22	15	68.2	15	0	0	0	0
Total	145	49	33.8	36	1	12	0	5

Table 2: Total number non-sentinel* respiratory specimens and positive results by type and subtype for week 52 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
52	60	4	6.7	4	0	0	0	27
Total	602	13	2.2	11	1	1	0	224

* 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 52 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
52	82	19	23.2	19	0	0	0	27
Total	747	62	8.3	47	2	13	0	229

* 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 52 and the 2004/2005 season to date

	Week 52 2004			Season to date		
	Flu A	**Flu B**	**Total**	**Flu A**	**Flu B**	**Total**
ERHA	8	0	8	14	0	**14**
MHB	1	0	1	2	0	**2**
MWHB	2	0	2	9	0	**9**
NEHB	2	0	2	4	0	**4**
NWHB	0	0	0	4	0	**4**
SEHB	4	0	4	12	0	**12**
SHB	0	0	0	8	0	**8**
WHB	2	0	2	9	0	**9**
Total	**19**	**0**	**19**	**62**	**0**	**62**

** 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.*

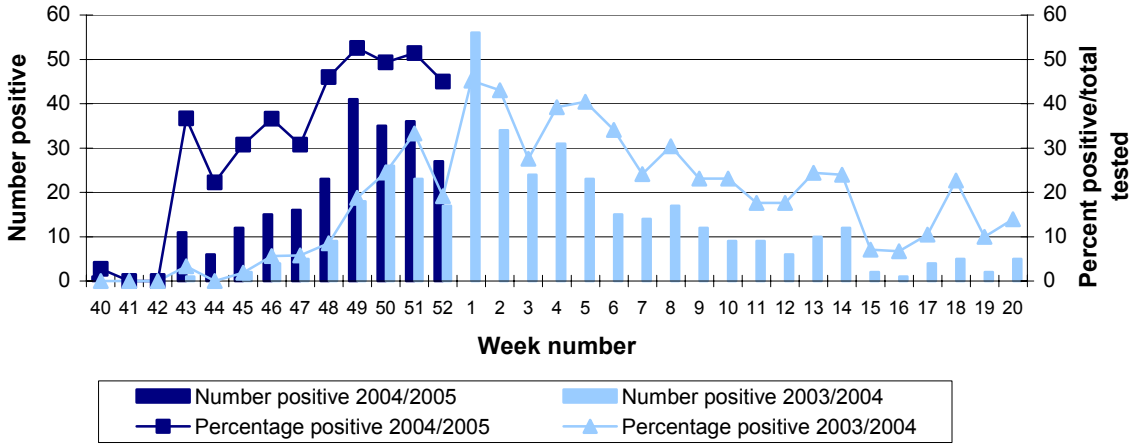

Figure 3. Number and percentage of non-sentinel RSV positive specimens detected during the 2004/2005 and 2003/2004 influenza seasons.

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 51, one health board reported localised activity, six health boards reported sporadic activity and one health board reported no activity.

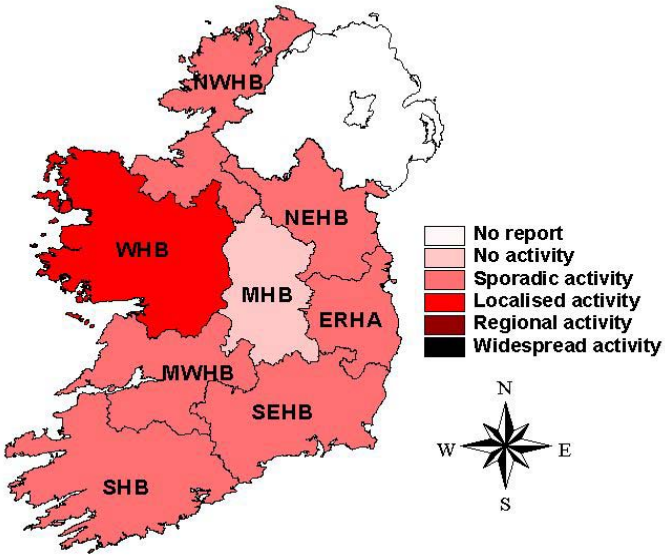

Figure 4: Map of influenza activity by health board/authority during week 51 2004/5

Influenza activity in Northern Ireland
Influenza activity levels increased in Northern Ireland during week 52. Three cases of clinical influenza and 74 cases of ILI were reported. These figures correspond to a combined ILI and clinical influenza rate of 81.4 cases per 100,000 population which is higher than the updated rate from week 51 (77.1 per 100,000 population). Returns were received from 16 out of 24 sentinel GP practices, giving a population coverage of 5.6%. The rate increased from the week 51 rate in children aged 0-4 years and decreased in all other age groups. Virology data for week 52 is as yet unavailable.
http://www.cdscni.org.uk//

Influenza activity in England, Scotland and Wales
Influenza-like illness consultation rates in England and Scotland have increased but remain within baseline levels. Week 52 ILI rates in England (30 cases per 100,000 population) and Scotland (36 per 100,000) showed an increase on the rates in week 51 (19.9 per 100,000 and 25 per 100,000 respectively). The week 52 ILI rate in Wales is unavailable. There were 17 influenza A (H3) detections and one influenza A (H1) detection from non-sentinel sources in England during week 52. Two influenza viruses have been characterised this season to date in England, one travel-associated influenza A/Wellington//1/2004(H3N2)-like virus and one influenza A/New Caledonia/20/99 (H1N1)-like virus. In Scotland, of the twelve samples which have been characterised there were eight influenza A/New Caledonia/20/99 (H1N1)-like viruses, two influenza A/Wellington//1/2004(H3N2)-like viruses and one influenza B/Jiangsu/10/2003-like virus.

An outbreak of influenza B in children was reported from a hospital in Southern England during week 52. This is the second influenza outbreak of the season in Britain, the first being the influenza A (H3) outbreak in a Southern England school which was reported in week 50.

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 51, although the number of countries reporting sporadic activity increased from 13 to 15. Spain reported local activity and all other countries reported no activity. Fifty-nine (10.1%) of the 587 sentinel swabs collected tested positive for influenza as did 46 non-sentinel swabs. Of the 105 positives, there were 94 influenza A and 11 influenza B. Thirty-four influenza A specimens were subtyped, seven were H1 (two of these were A(H1N1)) and 27 were H3 (14 of these were A(H3N2)).

RSV levels appear to be levelling off in Europe although increases were observed during week 51 in France, the Netherlands and Spain.

Twenty-three influenza viruses have been antigenically and/or genetically characterised in Europe since week 40 2004. Of these, there were 12 A/Wellington/1/2004 (H3N2)-like, one A/Fujian/411/2002 (H3N2)-like, seven A/New Caledonia/20/99 (H1N1)-like, two B/Jiangsu/10/2003-like and one B/Hong Kong/330/2001-like.

To date this season, influenza A (H3N2), influenza A (H1N1) and influenza B have been detected in Europe. The dominant virus this season to date is influenza A, accounting for 87% of detections. 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 312 influenza A positive samples in weeks 40-50, approximately two-thirds of those subtyped were A(H3) and one-third A(H1).
http://www.eiss.org/

Influenza activity in Canada
During week 51 (week ending 18/12/2004), localised activity was reported in Quebec, parts of British Columbia, Saskatchewan, Manitoba, Ontario and Nova Scotia. Alberta reported sporadic activity and elsewhere in Canada reported no activity. There were 129 influenza A detections and four influenza B detections in week 51. Since the start of the 2004/2005 influenza season, 87 influenza viruses have been antigenically characterised. Eighty-two were influenza A/Fujian/411/02(H3N2)-like, four were influenza B/Shanghai/361/02-like and one was influenza B/Hong Kong/330/01-like. To date this season, there have been a total of 46 influenza outbreaks, of which 36 occurred in retirement homes, seven in hospitals and three in schools. There have been 31 reports of laboratory confirmed influenza-associated hospitalizations in children under 16 years. All reports have been influenza A viruses.
http://www.phac-aspc.gc.ca/fluwatch/index.html

Influenza activity in the United States
Influenza activity in the US continued to increase slowly in week 50 (week ending 18/12/2004) but remained low. The proportion of ILI patient visits to sentinel providers (2.2 %) was below the national baseline (2.5%). New York State and New York City reported widespread influenza activity during week 50. Four states reported regional activity and ten states reported local activity. Thirty-four states, the District of Columbia and Puerto Rico reported sporadic influenza activity. WHO and NREVSS laboratories tested 1,703 specimens for influenza during week 50. Twenty-six were positive for influenza A (H3N2), 60 were positive for influenza A (unsubtyped) and seven were positive for influenza B. Since October 1st, 42 influenza A (H3N2) and 18 influenza B viruses have been antigenically characterised by the CDC. All of the influenza A viruses were influenza A/Fujian/411/02-like. Sixteen of the influenza B viruses were characterised as B/Shanghai/361/02-like and two were B/Hong Kong/330/01-like.
http://www.cdc.gov/flu/weekly/

Influenza activity Worldwide
Ukraine, Slovenia (one case of influenza A (unsubtyped) isolated) and China (one influenza A (H3) and five influenza B) all reported sporadic influenza activity during week 52. A local outbreak was reported in Iceland, with 4 isolates of influenza A (unsubtyped) obtained.
http://rhone.b3e.jussieu.fr/flunet/www/

Avian influenza
The WHO has received informal reports (30/12/2004) of a laboratory-confirmed case of influenza A (H5N1) in a hospital patient in Viet Nam. The 16 year old female was hospitalised on December 26 and Vietnamese authorities are investigating the source of her infection including the possibility of contact with infected poultry. This is the first human case of H5N1 detected in Viet Nam since September and brings the total number of laboratory confirmed cases in Thailand and Viet Nam in 2004 to 45. Thirty-two of these were fatal. Although the avian influenza virus is highly pathogenic in humans, there is currently 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/