

Weekly Influenza Surveillance Report



Week 53 2004

**Week starting Monday 27th December 2004 &
ending Sunday 2nd January 2005**

Report produced: 07/01/2005

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

Summary

During week 53 2004, influenza activity in Ireland showed a decrease from previous weeks. The influenza-like illness (ILI) rate of 42.5 cases per 100,000 population is lower than the rate of 45.2 per 100,000 for week 52. To date this season, 13 influenza A (H1N1), two influenza A (H3N2) and 47 influenza A (unsubtyped) viruses have been detected. RSV levels decreased in week 53. Fourteen non-sentinel specimens tested positive for RSV in week 53, a decrease on the 27 positive specimens in week 52.

Surveillance of influenza in week 53 worldwide was affected by the Christmas & New Year holidays, due to reporting delays. For these reasons caution is necessary in the interpretation of the epidemiological and virological data presented in this report.

Clinical data

During week 53 (week ending 2nd January 2005), 31 cases of ILI were reported by sentinel general practices, corresponding to an ILI consultation rate of 42.5 per 100,000 population (figure 1). This is a decrease from the rate of 45.2 per 100,000 for week 52.

Two ILI cases were in the 5-14 age group, 28 were in the 15-64 age group and one was aged over 64 years (figure 2). An increase in the rate of ILI cases in the 15-64 age groups has been noted over the last eight weeks.

Returns were received from 25 out of 35 sentinel GP practices, giving a population coverage of 1.9% (68.0% of the total possible reporting GP patient population). Fourteen practices reported ILI.

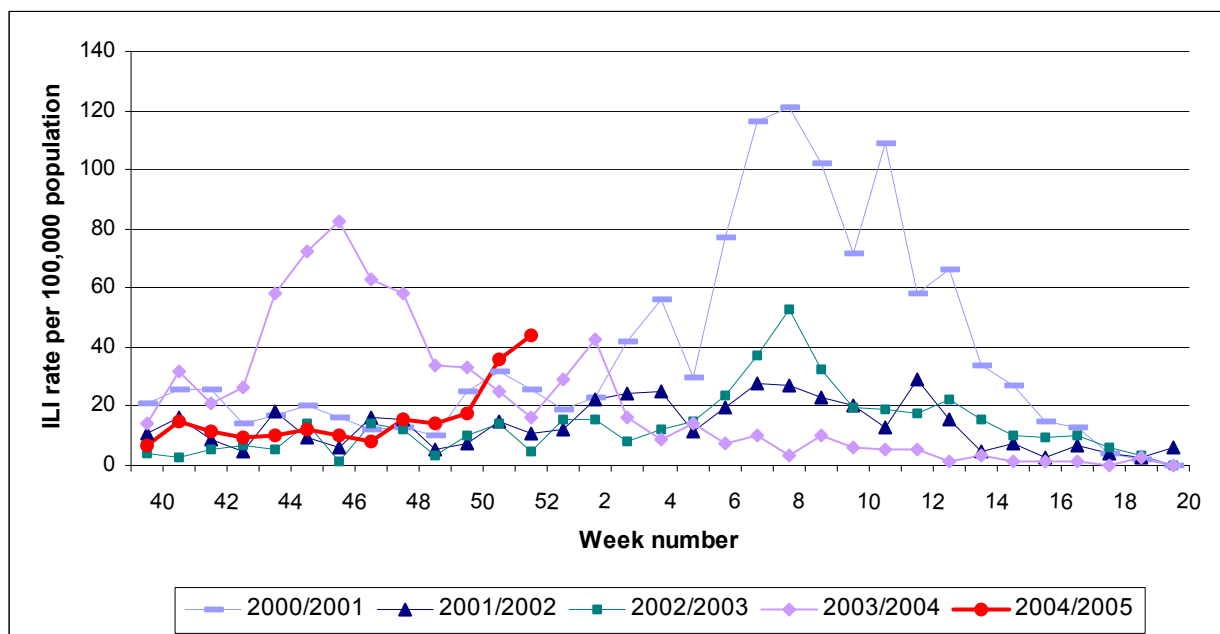


Figure 1. GP consultation rate for ILI per 100,000 population by week, during the 2000/2001, 2001/2002, 2002/2003, 2003/2004 & 2004/2005**-influenza seasons.

***Please note that for comparison with previous years, data for week 52 2004 on this graph represents the average of weeks 52/04 and 53/04*

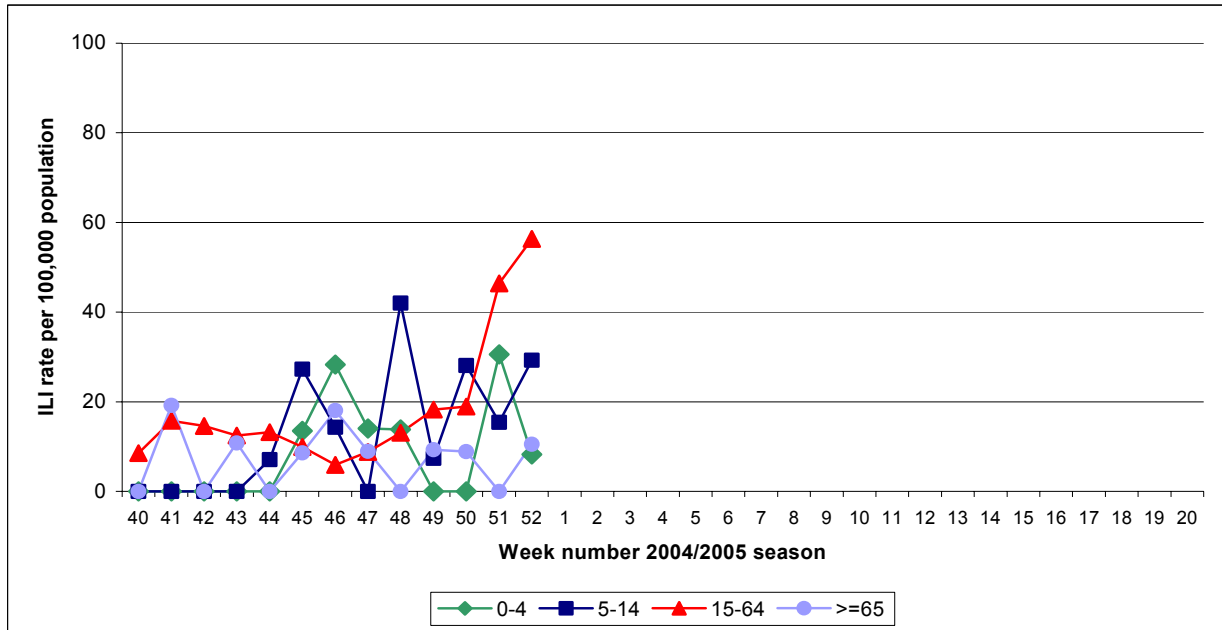


Figure 2. Age specific GP consultation rate* for ILI per 100,000 population by week** for the 2004/2005-influenza season

* 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.

**Please note that for comparison with previous years, data for week 52 2004 on this graph represents the average of weeks 52/04 and 53/04

Virological data from the National Virus Reference Laboratory

The National Virus Reference Laboratory (NVRL) received eight swabs taken during week 53 by sentinel GPs (tables 1&3). These are currently being analysed and will be discussed in the week 1 2005 influenza report. The NVRL also tested 44 respiratory non-sentinel specimens taken in hospitals during week 53. There were no influenza positive specimens and 14 were positive for RSV (tables 2&3, figure 3). During week 53, the percentage of RSV positive specimens decreased to 31.8% from 45.0% in week 52. During weeks 43-53, 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 243 RSV detections to date, 137 were aged 6 months or less, 64 were aged between 7 and 12 months, 29 were aged between 1 and 4 years, and eight 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 53 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
53	8	awaiting results	N/A	N/A	N/A	N/A	N/A	N/A
Total	153	49**	32**	36**	1**	12**	0**	5**

**These figures are exclusive of week 53 sentinel specimen results which are being analysed and will be discussed in the week 1 2005 report

Table 2: Total number non-sentinel* respiratory specimens and positive results by type and subtype for week 53 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
53	44	0	0	0	0	0	0	14
Total	646	13	2	11	1	1	0	238

* 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 53 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
53	52	0**	0**	0**	0**	0**	0**	14**
Total	799	62**	7.8**	47**	2**	13**	0**	243**

*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.

**These figures are exclusive of week 53 sentinel specimen results which are being analysed and will be discussed in the week 1 2005 report

Table 4: Total number of sentinel and non-sentinel* influenza A and B positive specimens by health board for week 53** and the 2004/2005 season to date

	Week 53 2004			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
ERHA	0	0	0	14	0	14
MHB	0	0	0	2	0	2
MWHB	0	0	0	9	0	9
NEHB	0	0	0	4	0	4
NWHB	0	0	0	4	0	4
SEHB	0	0	0	12	0	12
SHB	0	0	0	8	0	8
WHB	0	0	0	9	0	9
Total	0	0	0	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.

**These figures are exclusive of week 53 sentinel specimen results which are being analysed and will be discussed in the week 1 2005 report

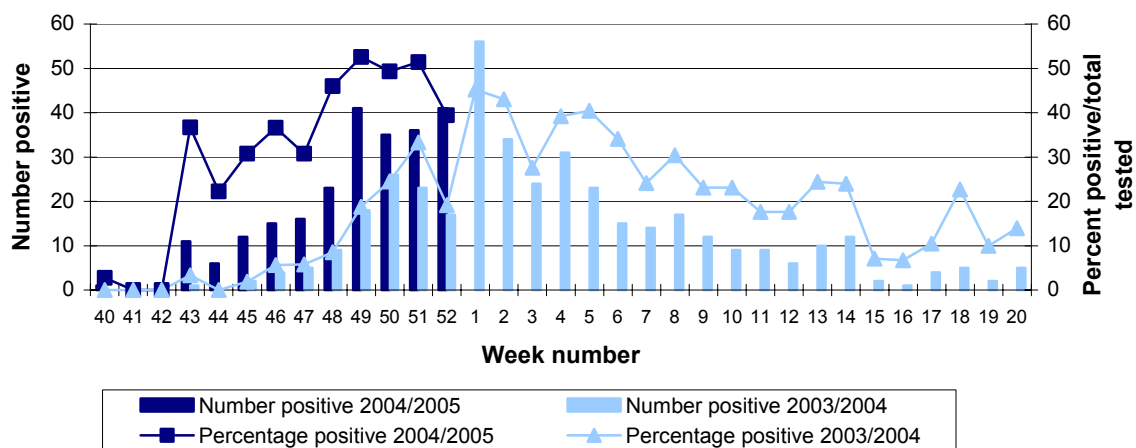


Figure 3. Number and percentage of non-sentinel RSV positive specimens detected during the 2004/2005** and 2003/2004 influenza seasons.

**Please note that for comparison with previous years, data for week 52 2004 on this graph represents the average of weeks 52/04 and week 53/04

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

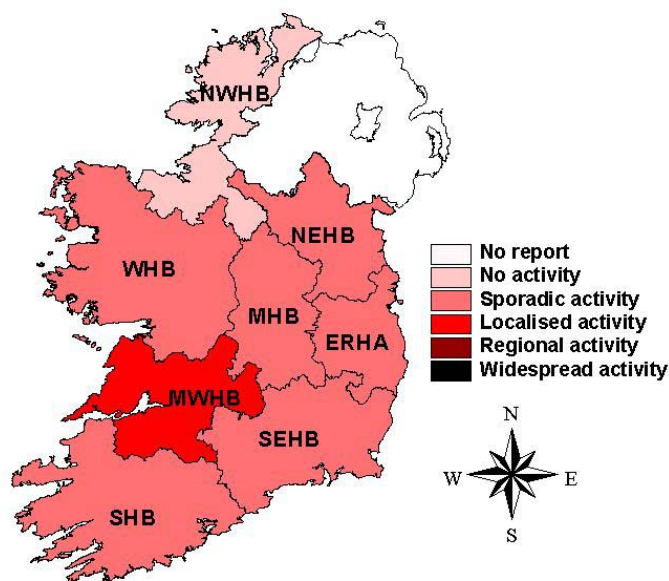


Figure 4: Map of influenza activity by health board/authority during week 52 2004/5

Influenza activity in Northern Ireland

Influenza activity levels decreased in Northern Ireland during week 53. Two cases of clinical influenza and 59 cases of ILI were reported. These figures correspond to a combined ILI and clinical influenza rate of 63.6 cases per 100,000 population which is lower than the updated rate from week 52 (81.4 per 100,000 population). The rate in the 0-4 year age group has fallen in week 53. Returns were received from 16 out of 24 sentinel GP practices, giving a population coverage of 5.6%. There were seven influenza detections (five in children aged 0-12 months, one in a 51 year old male and one in an elderly female) in hospital samples during weeks 52 and 53. Of 121 samples tested during weeks 52 and 53, 72 were positive for RSV.

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

Influenza activity in England, Scotland and Wales

Week 53 ILI rates in England (23 cases per 100,000 population) showed a decrease on the rate in week 52 (30 per 100,000) although it is not known if this represents a true fall in the rates or is as a result of disrupted holiday consultations. The ILI rate in Wales remained at 2.3 cases per 100,000 for weeks 52 and 53. As yet, week 53 rates for Scotland are unavailable but the week 52 ILI rate was below baseline at 36 per 100,000. There were 29 influenza A (H3) detections and two influenza A (H1) detections from community sources in England during weeks 52 and 53. 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

Clinical influenza activity remained at baseline levels in Europe during week 52, although the number of laboratory confirmed cases of influenza continued to increase. Spain and France reported local activity while sporadic activity was reported in fourteen countries. Poland, the Czech Republic and the Slovak Republic reported no activity. Seventy one (13%) of the 545 sentinel swabs collected tested positive for influenza, as did 44 non-sentinel swabs. Of the 115 positives, there were 106 influenza A and nine influenza B. Thirty-six influenza A specimens were subtyped, four were H1 (two of these were A(H1N1)) and 32 were H3 (13 of these were A(H3N2)).

Thirty-two influenza viruses have been antigenically and/or genetically characterised in Europe since week 40 2004. Of these, there were 14 A/Wellington/1/2004 (H3N2)-like, one A/Fujian/411/2002 (H3N2)-like, 12 A/New Caledonia/20/99 (H1N1)-like, three B/Jiangsu/10/2003-like and two 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 88% 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 isolates subtyped, influenza A (H3) has been detected most often.

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

Influenza activity in Canada

During week 52 (week ending 25/12/2004), widespread influenza activity was reported in one region of British Columbia. Localized activity was reported in Quebec, parts of Ontario and Saskatchewan. Reports of sporadic activity were received from parts of Manitoba, New Brunswick and Nova Scotia. Elsewhere in Canada reported no activity although reports were not received from Alberta and the Northwest Territories. There were 278 influenza A detections and two influenza B detections in week 51. Since the start of the 2004/2005 influenza season, 95 influenza viruses have been antigenically characterised. Ninety 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 63 influenza outbreaks, of which 52 occurred in retirement homes, eight in hospitals and three in schools. There have been 35 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 slowly increase in week 51 (week ending 25/12/2004) but remained low. Activity is increasing principally in the eastern states. The proportion of ILI patient visits to sentinel providers (2.4 %) was slightly below the national baseline (2.5%). Delaware, New York State and New York City reported widespread influenza activity during week 51. Six states reported regional activity and 16 states reported local activity. Twenty-six states, the District of Columbia and Puerto Rico reported sporadic influenza activity. WHO and NREVSS laboratories tested 1,340 specimens for influenza during week 51. Twenty-seven specimens were positive for influenza A (H3N2), 85 were positive for influenza A (unsubtyped) and 21 were positive for influenza B. One specimen was positive for influenza A(H1N1). 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, and China (one influenza A (H3) and five influenza B isolated) reported low levels of influenza activity during week 52. Local outbreaks were reported in Guyana, Iceland (four influenza A unsubtyped) and Japan (21 influenza A(H1), three influenza A(H3) and one influenza B).

<http://rhone.b3e.jussieu.fr/flunet/www/>

Avian influenza

A six-year-old boy in Viet Nam died from the avian influenza virus on December 30. Avian influenza has also been confirmed in a nine-year-old boy hospitalised in Vietnam on January 2. Initial tests on both children have identified the H5 subtype of the virus and further testing is underway. The 16-year-old female patient hospitalised with the H5N1 virus during week 52 remains in a critical condition. Vietnamese authorities are monitoring close contacts of these cases for any sign of illness. All three cases occurred in the southern part of the country where poultry outbreaks have been recurring since December and are the first human cases of

H5N1 detected in Viet Nam since September. The total number of laboratory confirmed cases in Thailand and Viet Nam since the beginning of 2004 is now 47. Thirty-three 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/>