

Weekly Influenza Surveillance Report



Week 50 2004

**Week starting Monday 6th December 2004 &
ending Sunday 12th December 2004**

Report produced: 16/12/2004

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

Summary

During week 50 2004, influenza activity remained at low levels in Ireland. The influenza-like illness (ILI) rate of 18.0 cases per 100,000 population is slightly higher than the updated rate of 14.4 per 100,000 for week 49. To date this season, 13 influenza A (H1N1), two influenza A (H3N2) and 14 influenza A (unsubtyped) viruses have been detected. RSV levels fell slightly in week 50. Thirty five non-sentinel specimens and one sentinel specimen tested positive for RSV in week 50, a decrease on the 41 positive non-sentinel specimens in week 49.

Clinical data

During week 50 (week ending 12th December 2004), 18 cases of ILI were reported by sentinel general practices, corresponding to an ILI consultation rate of 18.0 per 100,000 population (figure 1). This is an increase from the updated rate of 14.4 per 100,000 for week 49.

Four ILI cases were in the 5-14 age group, thirteen were in the 15-64 age group and one was aged over 64 years (figure 2). The rate of ILI cases in the 15-64 age group has increased over the last five weeks whereas the ILI rate in the 0-4 age group has fallen to zero in weeks 49 and 50 after reaching a peak of 33.1 cases per 100,000 in week 46.

Returns were received from 31 out of 35 sentinel GP practices, giving a population coverage of 2.5% (93.1% of the total possible reporting GP patient population). Eleven practices reported ILI.

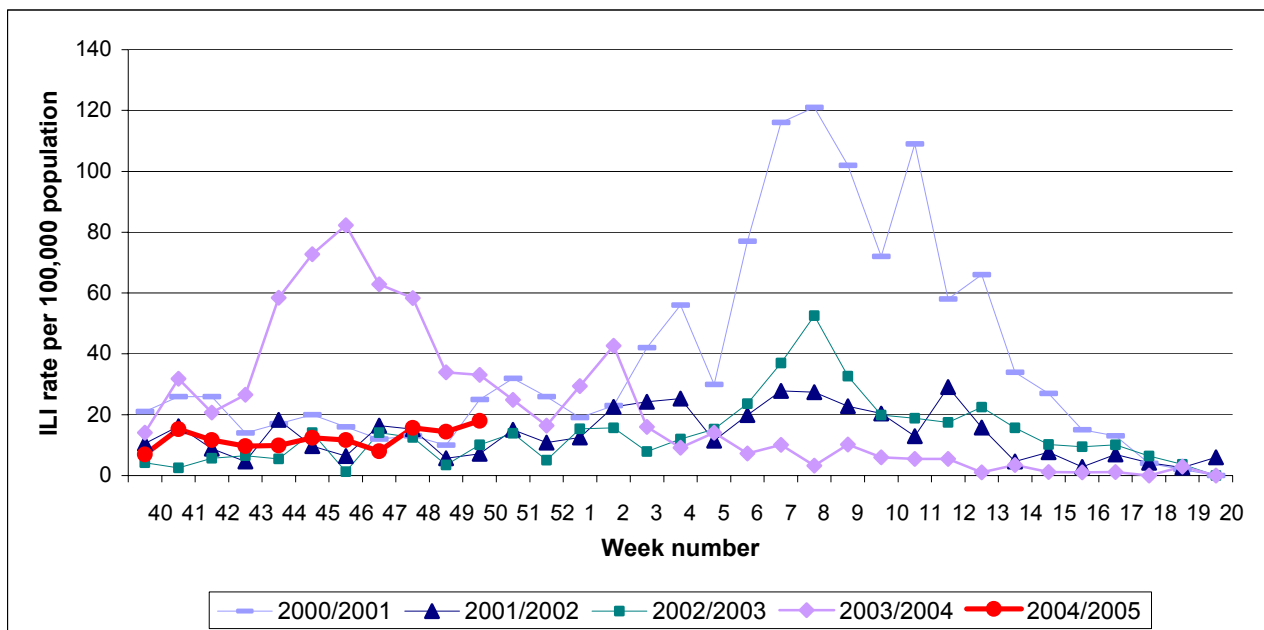


Figure 1. GP consultation rate for ILI per 100,000 population by week, during the 2000/2001, 2001/2002, 2002/2003, 2003/2004 & 2004/2005-influenza seasons.

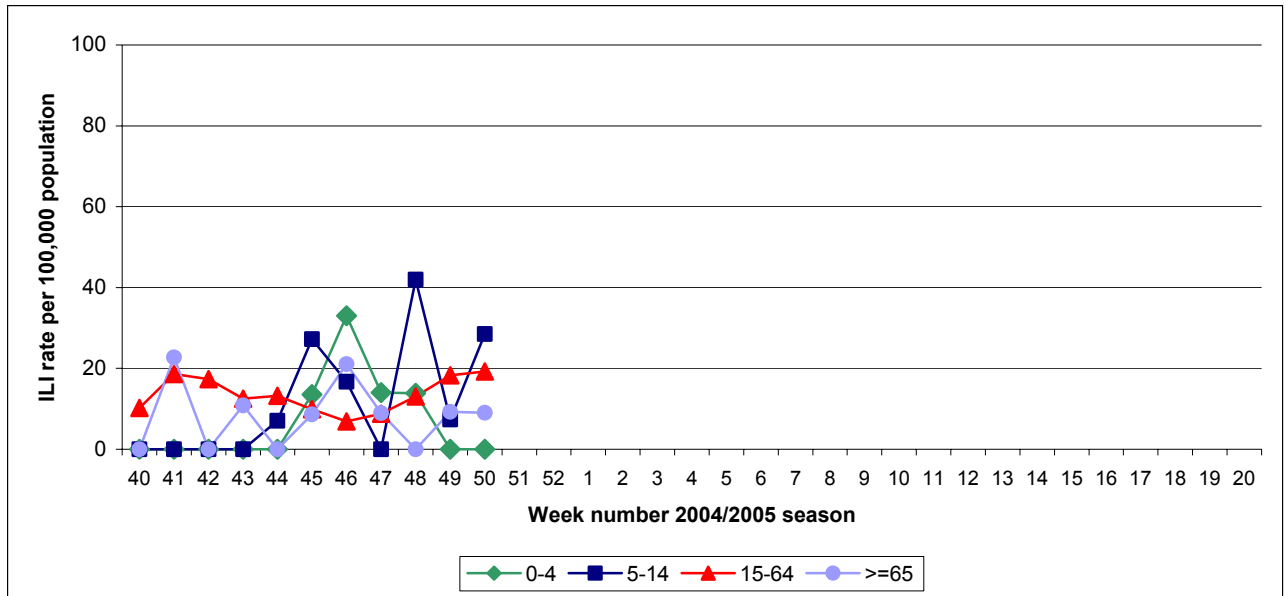


Figure 2. Age specific GP consultation rate* for ILI per 100,000 population by week for the 2004/2005-influenza season

* 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 50 the National Virus Reference Laboratory (NVRL) received 14 swabs from sentinel GPs. Four were positive for influenza A (unsubtyped) and one was positive for influenza A(H1N1). There was one RSV positive (tables 1&3). The NVRL also tested 71 respiratory non-sentinel specimens from hospitals during week 50. One specimen tested positive for influenza A (unsubtyped) and 35 were positive for RSV (tables 2&3, figure 3). During weeks 43-50, the percentage of RSV positive specimens has been noticeably higher than the percentages within the same period in the 2003/2004 season (figure 3).

To date this season, 13 influenza A (H1N1), two influenza A (H3N2) and 14 influenza A (unsubtyped) viruses have been detected (table 3). Five of these were in the 0-4 age group, eight were in the 5-14 age group, 14 were in the 15-64 age group and two were aged over 64 years. Of the 165 RSV detections to date, 82 were aged 6 months or less, 55 were aged between 7 and 12 months, 23 were aged between 1 and 4 years, and four were aged 5 years or more.

Antigenic characterisation

One influenza A (H1N1) isolate to date 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.

Table 1: Total number of sentinel specimens tested for influenza and positive results by type and subtype for week 50 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
50	14	5	35.7	4	0	1	0	1
Total	93	21	22.6	8	1	12	0	4

Table 2: Total number non-sentinel* respiratory specimens and positive results by type and subtype for week 50 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
50	71	1	1.4	1	0	0	0	35
Total	472	8	1.7	6	1	1	0	161

* 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 50 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
50	85	6	7.1	5	0	1	0	36
Total	565	29	5.1	14	2	13	0	165

* 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 50 and the 2004/2005 season to date

	Week 50 2004			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
ERHA	2	0	2	5	0	5
MHB	1	0	1	1	0	1
MWHB	1	0	1	7	0	7
NEHB	1	0	1	1	0	1
NWHB	0	0	0	3	0	3
SEHB	1	0	1	4	0	4
SHB	0	0	0	7	0	7
WHB	0	0	0	1	0	1
Total	6	0	6	29	0	29

* 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.

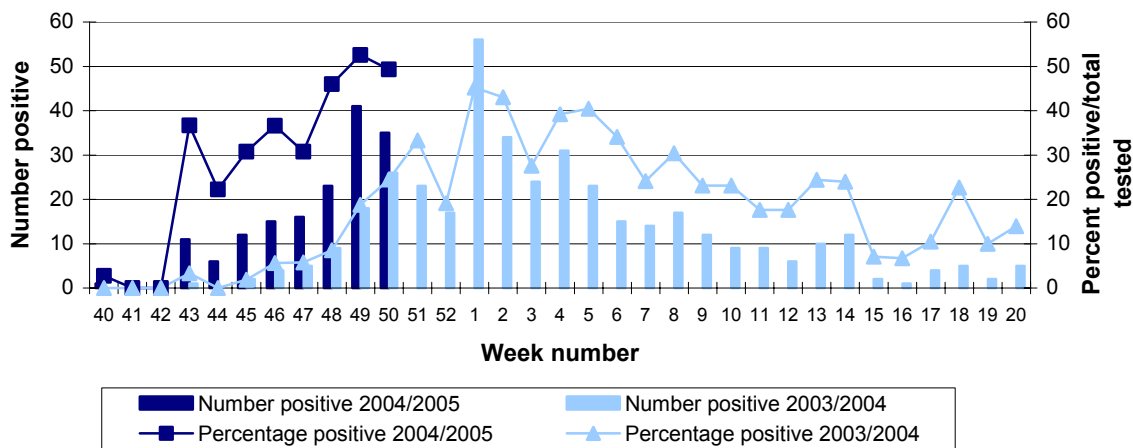


Figure 3. Number and percentage of non-sentinel RSV positive specimens detected during the 2004/2005 and 2003/2004 influenza seasons.

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 49, seven health boards reported sporadic activity and one health board reported no activity.

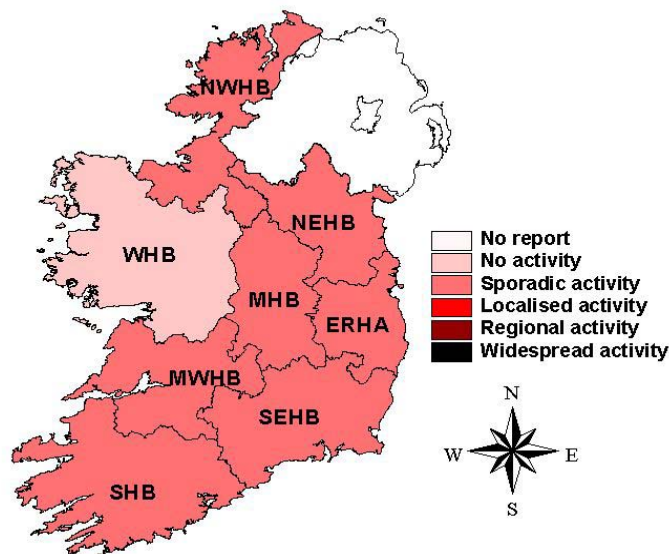


Figure 4: Map of influenza activity by health board/authority during week 49 2004/5

Influenza activity in Northern Ireland

Influenza activity levels increased in Northern Ireland during week 50. Eight cases of clinical influenza and 115 cases of ILI were reported. These figures correspond to a combined clinical influenza and ILI rate of 98.7 per 100,000 population which is an increase on the rate of 33.8 per 100,000 in week 49. The rate in the 0-4 age group more than trebled from week 49. Returns were received from 21 out of 23 sentinel GP practices, giving a population coverage of 7.3%. No sentinel swabs tested positive for influenza. Fourteen of the 49 non-sentinel swabs submitted tested positive for RSV-B. Influenza A (unsubtyped) was detected in a hospitalised young child and the first influenza A(H3) detection of the season was made in a swab from an elderly hospital patient.

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

Influenza activity in England, Scotland and Wales

Low levels of influenza activity were reported in Britain during week 50. Week 50 ILI rates in England (13.9 cases per 100,000 population), Scotland (21 per 100,000) and Wales (0.46 per 100,000) were well within baseline levels. There were four influenza A (H3) detections from non-sentinel sources in Britain during week 50. RSV levels continued to increase, especially among children in the 0-4 age group. There were two outbreaks of respiratory illness reported in southern England, one in a school and one in a nursing home for the elderly.

<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 49, although the number of countries reporting sporadic activity has increased from seven to eleven (Ireland, England, France, Belgium, Latvia, Germany, Switzerland, Northern Ireland, Scotland, Slovenia and Spain). All other countries reported no activity. Twenty two (5.3%) of the 418 sentinel swabs collected tested positive for influenza as did 16 non-sentinel swabs. Of the 38 positives, there were 31 influenza A and seven influenza B. Eleven influenza A specimens were subtyped, five were H1 (Northern Ireland), three were H3 (England, Portugal and Spain) and three were H3N2 (Belgium and Germany[2]).

RSV levels have been increasing in Western Europe, as expected for the time of year. Nine countries, seven of which are on the western periphery of Europe, reported increasing incidence of RSV detections.

Thirteen influenza viruses have been antigenically and/or genetically characterised in Europe since week 40 2004. Eight were A/Wellington/1/2004 (H3N2)-like (England, France, Germany, Norway[2], Scotland, Switzerland and Sweden). The additional reports were; one A/Fujian/411/2002 (H3N2)-like (Germany), three A/New Caledonia/20/99 (H1N1)-like (England, Scotland and Ireland) and one B/Jiangsu/10/2003-like (Norway).

To date this season, influenza A (H3N2), influenza A (H1N1) and influenza B have been detected in Europe, with most of the positive detections being in Western Europe. Of the 121 influenza A positive samples in weeks 40-48, 53 were unsubtyped, 14 were H1, 7 were H1N1, 13 were H3 and 15 were H3N2. Nineteen specimens tested positive for influenza B in the weeks prior to week 49.

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

Influenza activity in Canada

During week 49 (week ending 04/12/2004), sporadic activity was reported in four provinces: Alberta, Saskatchewan, Quebec and Nova Scotia. British Columbia, Manitoba and Ontario reported a mix of localised and sporadic activity. Elsewhere in Canada reported no activity. There were 34 influenza A detections and one influenza B detection in week 49. Since the start of the 2004/2005 influenza season, 65 influenza viruses have been antigenically characterised. Sixty three 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 18 influenza outbreaks, of which 12 occurred in retirement homes, three in hospitals and three 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 48 (week ending 04/12/2004). The proportion of ILI patient visits to sentinel providers (1.7%) was below the national baseline (2.5%). Two states and New York City reported regional activity and four states reported local activity. Thirty-six states, the District of Columbia and Puerto Rico reported sporadic influenza activity and 8 states reported no influenza activity. WHO and NREVSS laboratories tested 1,845 specimens for influenza during week 48. Sixteen were positive for influenza A (H3N2), 22 were positive for influenza A (unsubtyped) and eleven were positive for influenza B. Since October 1st, 26 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

During week 50, low levels of influenza activity were reported by Madagascar and Mexico. China reported sporadic influenza activity during week 50 with one case of influenza A (unsubtyped), eight cases of influenza A(H3) and four cases of influenza B isolated. Argentina also reported sporadic activity with one isolate of influenza B.

<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/>