

Weekly Influenza Surveillance Report



Week 2 2005

**Week starting Monday 10th January 2005 &
ending Sunday 16th January 2005**

Report produced: 20/01/2005

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

Summary

During week two 2005, influenza activity in Ireland showed a decrease from activity in the previous week. The influenza-like illness (ILI) rate of 33.4 cases per 100,000 population is lower than the updated rate of 87.3 per 100,000 for week one. The first influenza B detections of the season were made during weeks one and two 2005. To date this season, two influenza B, 21 influenza A (H1N1), two influenza A (H3N2) and 83 influenza A (unsubtyped) viruses have been detected. RSV levels also decreased in week two. Twenty non-sentinel specimens tested positive for RSV in week two, a decrease on the 26 positive specimens in week one.

Clinical data

During week two (week ending 16th January 2005), 32 cases of ILI were reported by sentinel general practices, corresponding to an ILI consultation rate of 33.4 per 100,000 population (figure 1). This is a noticeable decrease from the updated rate of 87.3 per 100,000 for week one.

Two ILI cases were in the 0-4 age group, three were in the 5-14 age group, 26 were in the 15-64 age group and one was aged over 64 years. Returns were received from 31 out of 35 sentinel GP practices, giving a population coverage of 2.4% (89.4% of the total possible reporting GP patient population). Eighteen practices reported ILI.

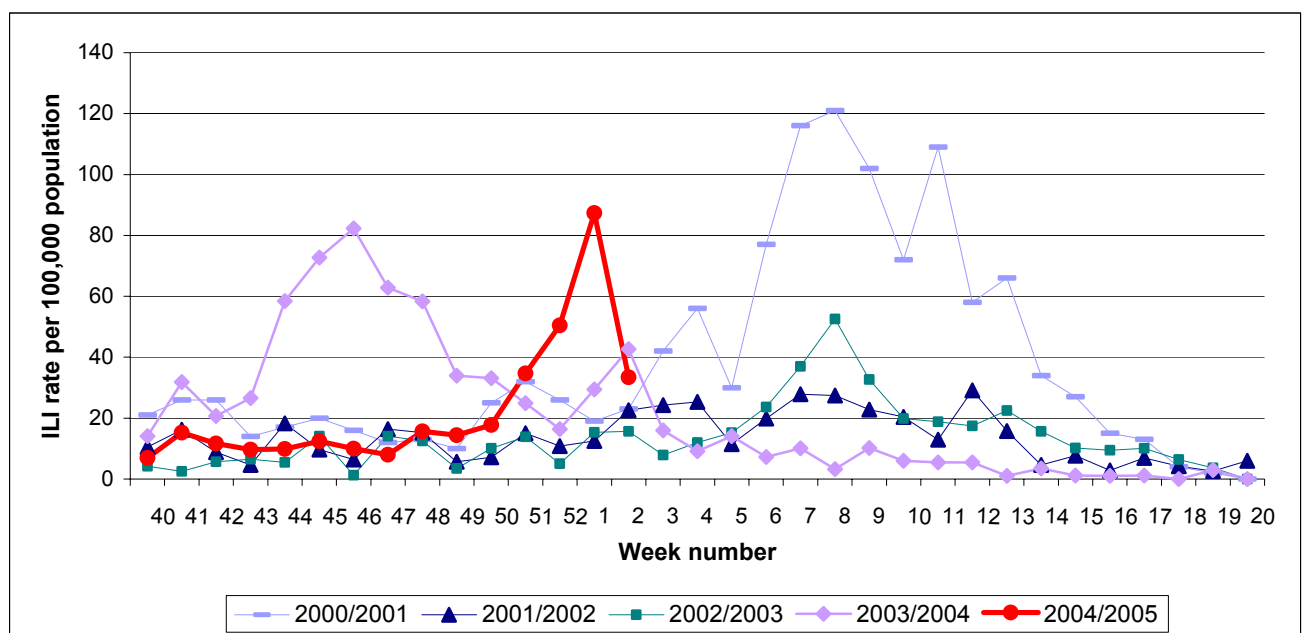


Figure 1. GP consultation rate for ILI per 100,000 population by week, during the 2000/2001, 2001/2002, 2002/2003, 2003/2004 & 2004/2005**-influenza seasons.

***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*

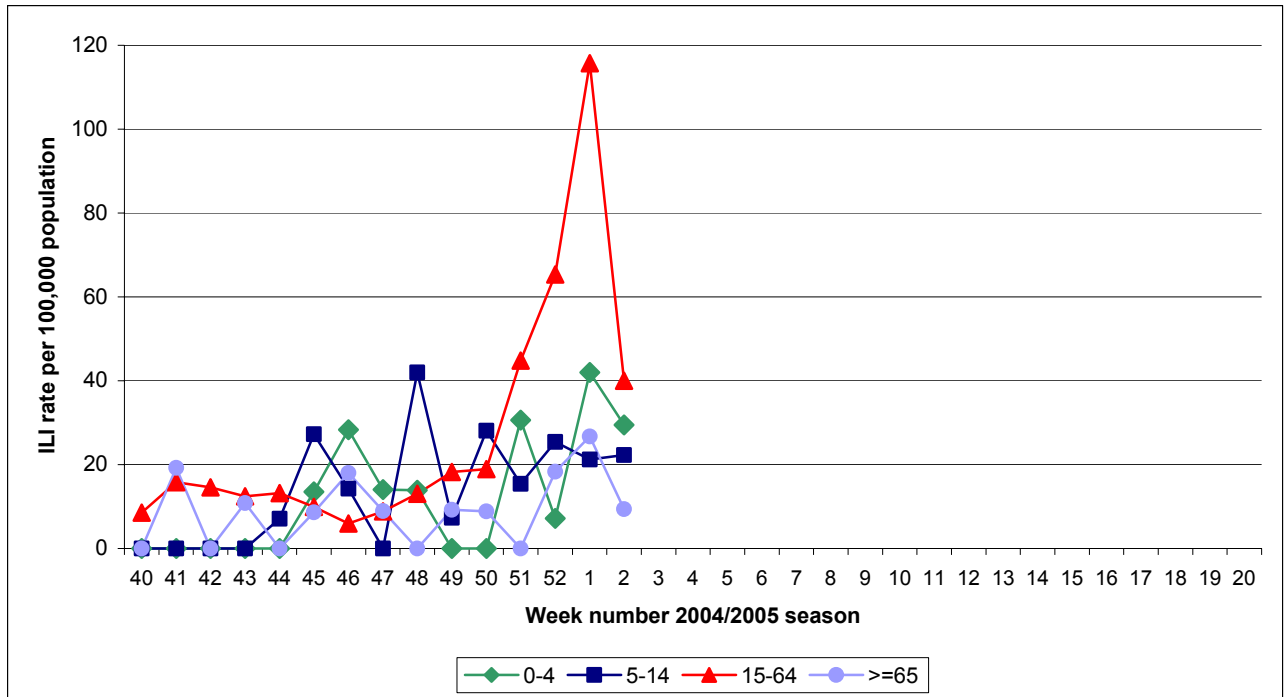


Figure 2. Age specific GP consultation rate* for ILI per 100,000 population by week** for the 2004/2005-influenza season

* 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 15 swabs taken during week two by sentinel GPs (tables 1&3). Three of these tested positive for influenza A (unsubtyped) and one tested positive for influenza B. This sample and an influenza B positive received in an update from week one are the first influenza B detections of the 2004/2005 season. The NVRL also tested 61 respiratory non-sentinel specimens taken in hospitals during week two. There were seven influenza A positives and 20 specimens tested positive for RSV (tables 2&3, figure 3).

During week two, the percentage of RSV positive specimens decreased to 32.8% from 41.3% in week one. This is lower than the percentage of RSV positive specimens in week two 2004 (43.0%). During weeks 43-53, the percentage of RSV positive specimens was noticeably higher than the percentages during the same period in the 2003/2004 season (figure 3).

To date this season, two influenza B, 21 influenza A (H1N1), two influenza A (H3N2) and 83 influenza A (unsubtyped) viruses have been detected (table 3). Twenty of these were in the 0-4 age group, 16 were in the 5-14 age group, 68 were in the 15-64 age group and three were aged over 64 years. Of the 290 RSV detections to date, 161 were aged 6 months or less, 77 were aged between 7 and 12 months, 34 were aged between 1 and 4 years, and 13 were aged 5 years or more. Ages were unavailable for five of the positive RSV patients and one of the influenza positive patients.

Table 1: Total number of sentinel specimens tested for influenza and positive results by type and subtype for week 2 2005 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
2	15	4	26.7	3	0	0	1	0
Total	222	83	37.4	60	1	20	2	5

**Totals include specimens for which results are pending (1 in week 2)

Table 2: Total number non-sentinel* respiratory specimens and positive results by type and subtype for week 2 2005 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
2	61	7	11.5	7	0	0	0	20
Total	787	25	3.2	23	1	1	0	285

Table 3: Total number of sentinel and non-sentinel* respiratory specimens and positive results for week 2 2005 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
2	76	11	14.5	10	0	0	1	20
Total	1009	108	10.7	83	2	21	2	290

*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.

**Totals include specimens for which results are pending (1 in week 2)

Table 4: Total number of sentinel and non-sentinel* influenza A and B positive specimens by health board for week 2 2005 and the 2004/2005 season to date

	Week 2 2005			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
ERHA	4	0	4	30	0	30
MHB	0	0	0	3	0	3
MWHB	0	0	0	12	0	12
NEHB	1	0	1	9	0	9
NWHB	3	0	3	7	0	7
SEHB	0	1	1	23	1	24
SHB	1	0	1	9	1	10
WHB	1	0	1	13	0	13
Total	10	1	11	106	2	108

* 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.

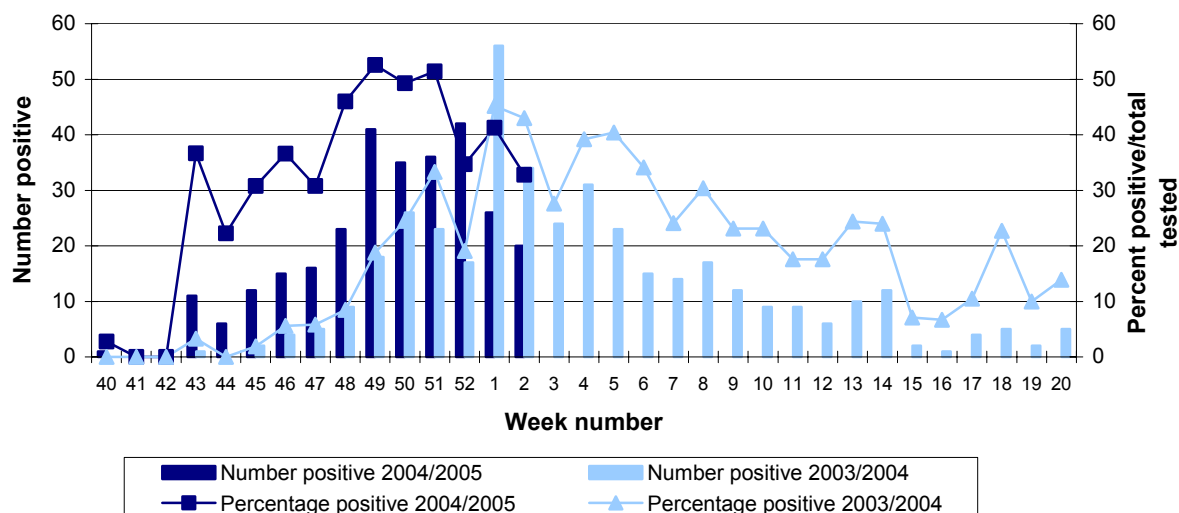


Figure 3. Number and percentage of non-sentinel RSV positive specimens detected during the 2004/2005** and 2003/2004 influenza seasons.

**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

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 provide protection against these strains.

Outbreak reports

An outbreak of influenza A (unsubtyped) in a long-stay care facility for the elderly was reported by the ERHA during week three. This is the second influenza outbreak reported this season. 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.

Mortality data

There were no influenza deaths reported during week two. Two deaths registered during week one 2005 were attributed to influenza, one in a child in the 5-14 age group with an underlying chronic medical condition who died in early December 2004 and the second in a person aged over 64 years who died in early January 2005.

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 one, the SEHB and ERHA reported regional activity, the NEHB reported localised activity, four health boards reported sporadic activity and one reported no activity.

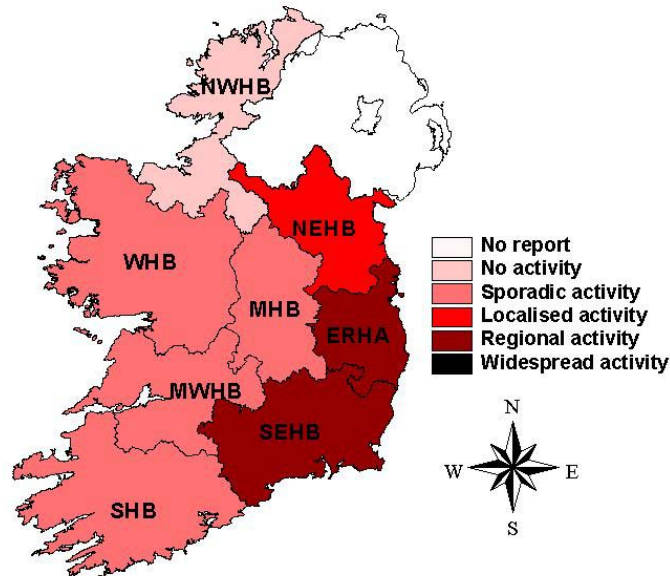


Figure 4: Map of influenza activity by health board/authority during week 1 2004/5

Influenza activity in Northern Ireland

Influenza activity levels decreased in Northern Ireland during week two. One case of clinical influenza and 48 cases of ILI were reported. These figures correspond to a combined ILI and clinical influenza rate of 44.5 cases per 100,000 population which is markedly lower than the rate from week one (90.7 per 100,000 population). Returns were received from 19 of the 24 sentinel GP practices, giving a population coverage of 6.5%. Of the 60 non-sentinel swabs tested during week two, 20 were RSV positive. There were four influenza A detections in non-sentinel swabs, two in young children and two in adults.

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

Influenza activity in England, Scotland and Wales

The week two ILI rate in England (34 per 100,000 population) showed a decrease on the rate in week one (41 per 100,000). The ILI rate in Scotland remained below baseline at 41 per 100,000. The ILI rate in Wales decreased from eight per 100,000 in week one to two per 100,000 in week two. During week one, there were 21 influenza A (H3) detections and four influenza A (H1) detections from hospital and community sources in England.

Fifty four influenza viruses have been characterised this season to date in England, 26 influenza A/Wellington/1/2004(H3N2)-like viruses, 22 influenza A/New Caledonia/20/99 (H1N1)-like viruses, 5 influenza B/Shanghai/361/02-like viruses and one influenza B/Hong Kong/330/-01-like virus. In Scotland, of the 19 samples which have been characterised there

were 11 influenza A/New Caledonia/20/99 (H1N1)-like viruses, seven 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 was the second influenza outbreak of the season in Britain, the first being the influenza A (H3) outbreak in a school in Southern England 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 in Europe is gradually increasing. During week one, Spain reported widespread activity and three countries (France, England and Switzerland) reported regional activity while local activity was reported in Belgium and Italy. Of the other 18 networks, nine reported sporadic activity and nine reported no activity. One hundred and twenty five (19%) of the 675 sentinel swabs collected tested positive for influenza, as did 108 non-sentinel swabs. Of these 233 positives, 218 were influenza A and 15 were influenza B. Fifty six influenza A specimens were subtyped, one was A(H1N1) and 55 were H3 (12 of these were A(H3N2)).

Eighty-two influenza viruses have been antigenically and/or genetically characterised in Europe since week 40 2004. Of these, there were 45 A/Wellington/1/2004 (H3N2)-like, 22 A/New Caledonia/20/99 (H1N1)-like, four A/Fujian/411/2002 (H3N2)-like, four B/Jiangsu/10/2003-like and seven 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 91% of detections. Eighty two percent of the influenza A isolates subtyped have been A (H3), with A(H1) making up the remaining 18%. The predominant A(H3) viruses are A/Wellington/1/2004 (H3N2)-like, only 9% of A(H3) characterised viruses are A/Fujian/411/2002 (H3N2)-like.

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

Influenza activity in Canada

During week one (week ending 8/1/2005), a mix of widespread and localised influenza activity was reported in British Columbia, Alberta, Saskatchewan and Ontario. Localised activity was reported in Manitoba, Quebec, New Brunswick and parts of Nova Scotia. Elsewhere in Canada reported sporadic activity or no activity. There were 730 influenza A detections and eight influenza B detections during week one. Since the start of the 2004/2005 influenza season, 153 influenza viruses have been antigenically characterised. One hundred and forty seven were influenza A/Fujian/411/02(H3N2)-like, five 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 163 influenza outbreaks, of which 144 occurred in retirement homes, 14 in hospitals and five in schools. There have been 110 reports of laboratory-confirmed influenza-associated hospitalisations in children under 16 years. Of these, 108 were influenza A viruses and two were influenza B viruses.

<http://www.phac-aspc.gc.ca/fluwatch/index.html>

Influenza activity in the United States

Influenza activity in the US continued to increase in week one (week ending 8/1/2005). Activity is increasing principally in the Eastern States. The proportion of ILI patient visits to sentinel providers was at the national baseline (2.5%). During week one, New York City and eight states reported widespread influenza activity. Twelve states reported regional activity and ten states reported local activity. Twenty states, the District of Columbia and Puerto Rico reported sporadic influenza activity in week one. The first paediatric death of the 2004/2005 season was reported in Maine during week one. WHO and NREVSS laboratories tested 3,040 specimens for influenza during week one. One specimen was an influenza A(H1N1) virus, 69 were influenza A (H3N2) viruses, 383 were influenza A viruses that were unsubtyped and 57 were influenza B viruses. Since October 1st, two influenza A(H1) and 88 influenza A (H3N2) have been antigenically characterised by the CDC. All of the influenza A(H3N2) isolates were characterised as influenza A/Fujian/411/02-like. The majority of the 22 influenza B viruses that have been characterised to date have been B/Shanghai/361/02-like.

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

Influenza activity Worldwide

During week two, sporadic activity was reported in China, Ukraine, Turkey and Latvia. Malaysia, Mexico and Argentina reported no influenza activity for week two.

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

Avian influenza

The WHO has received reports of two additional H5N1 cases in Viet Nam. An 18 year old female who was hospitalised on January 1 and then died January 10. Another female aged 35 years was hospitalised on January 9 and subsequently died. These cases occurred in the southern part of the country where poultry outbreaks have been recurring since December 2004.

These cases bring the total number of cases in Viet Nam since early January to six, all of which have been fatal. The first case onset was December 16 and the last was on January 6. All of these cases had direct contact with poultry. So far field investigation has not revealed any evidence of person-to-person transmission. The total number of laboratory-confirmed cases in Thailand and Viet Nam since the beginning of 2004 is now 51. Thirty-seven 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/>