

Weekly Influenza Surveillance Report



Week 46 2004

**Week starting Monday 8th November 2004 &
ending Sunday 14th November 2004**

Report produced: 18/11/2004

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

Summary

During week 46 2004, influenza activity remained at low levels in Ireland. Antigenic characterisation results for the first influenza A (H1N1) positive specimen of the season were received. Results show that this isolate is antigenically closely related to A/New Caledonia/20/99(H1N1), which is covered by the current vaccine. RSV levels have been increasing for the past few weeks, as expected for this time of year, and thirteen non-sentinel respiratory specimens tested positive for RSV in week 46.

Clinical data

During week 46 (week ending 14th November 2004), nine cases of ILI were reported by sentinel general practices, corresponding to an ILI consultation rate of 11.3 per 100,000 population (figure 1). This is similar to the updated rate of 12.4 per 100,000 population for week 45. Two of the ILI cases were in the 0-4 age group, two were in the 5-14 age group, three were in the 15-64 age group and two were in the over 65 age group (figure 2). Returns were received from 29 out of 35 sentinel GP practices, giving a population coverage of 2.0% (74.1% of the total possible reporting GP patient population). Six practices reported ILI.

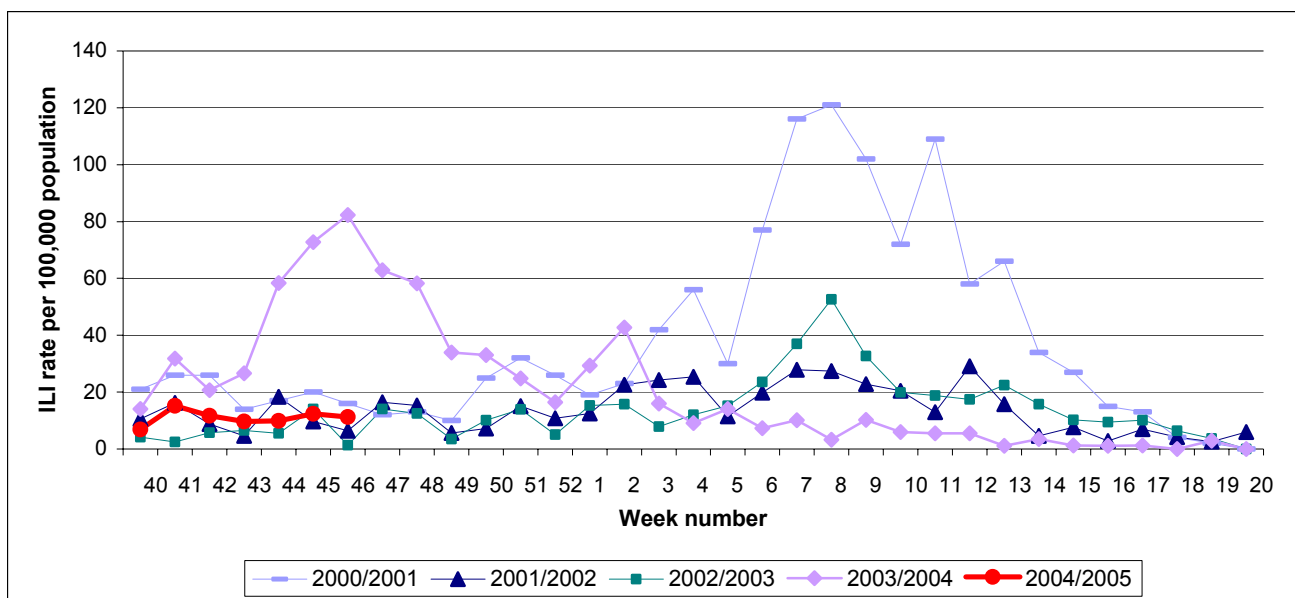


Figure 1. GP consultation rate for ILI per 100,000 population by week, during the 2000/2001, 2001/2002, 2002/2003, 2003/2004 & 2004/2005-influenza seasons.

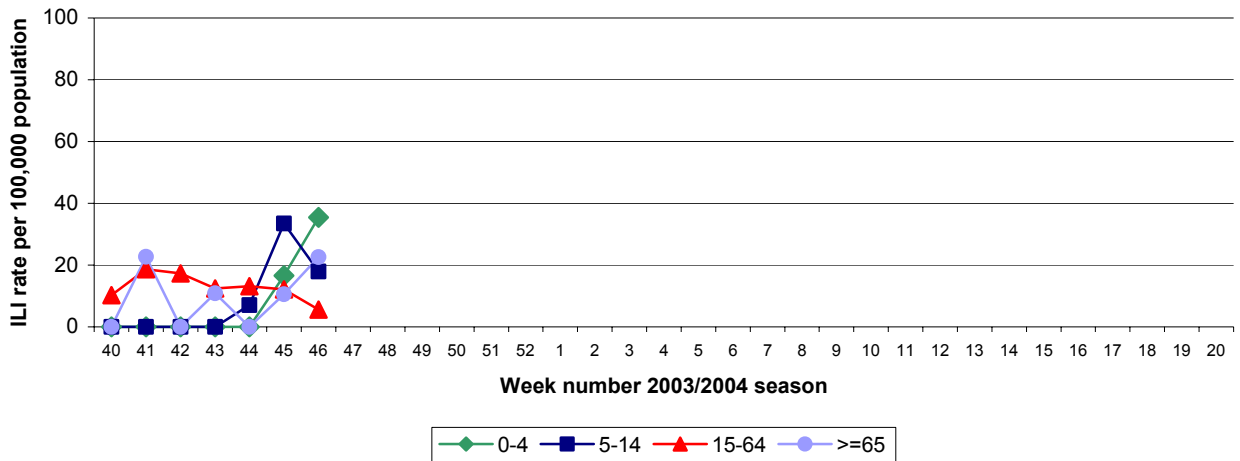


Figure 2. Age specific GP consultation rate* for ILI per 100,000 population by week for the 2004/2005-influenza season

* 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 46 the National Virus Reference Laboratory (NVRL) received nine swabs from sentinel GPs. Three were positive for influenza A (unsubtyped) and RSV results are pending (tables 1&3). The NVRL also tested 39 respiratory non-sentinel specimens from hospitals, during week 46. No specimens were positive for influenza and thirteen were positive for RSV (tables 2&3, figure 3).

Of the eleven influenza A detections in the 2004/2005 season to date, five were in the 15-64 age group, two were in the 0-4, two were in the 5-14 age group and two were in the over 65 age groups.

Antigenic characterisation

Antigenic characterisation results for the influenza A (H1N1) positive from week 40 were received from Mill Hill (WHO influenza reference centre in the UK). Their results showed that this isolate is antigenically closely related to A/New Caledonia/20/99 and the more recent H1N2 reference virus A/Iceland/123/03. Phylogenetic analysis of the HA and NA sequences showed that it is similar to recent H1N1 isolates such as A/England/40/04. The current seasons vaccine contains an A/New Caledonia/20/99(H1N1)-like virus and should provide good protection against this influenza strain. The first influenza A (H3N2) positive of the season has also been sent to Mill Hill for antigenic characterisation and results are awaited.

Table 1: Total number of sentinel specimens tested for influenza and positive results by type and subtype for week 46 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
46	9	3	33.3	3	0	0	0	0
Total	50	7	14.0	5	0	2	0	1

Table 2: Total number non-sentinel* respiratory specimens and positive results for week 46 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
46	39	0	0	0	0	0	0	13
Total	212	4	1.9	2	1	1	0	43

* 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 46 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
46	48	3	6.3	3	0	0	0	13
Total	262	11	4.2	7	1	3	0	44

* 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 46 and the 2004/2005 season to date

	Week 46 2004			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
ERHA	0	0	0	0	0	0
MHB	0	0	0	0	0	0
MWHB	1	0	1	2	0	2
NEHB	0	0	0	0	0	0
NWHB	0	0	0	2	0	2
SEHB	0	0	0	3	0	3
SHB	1	0	1	3	0	3
WHB	1	0	1	1	0	1
Total	3	0	3	11	0	11

* 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.

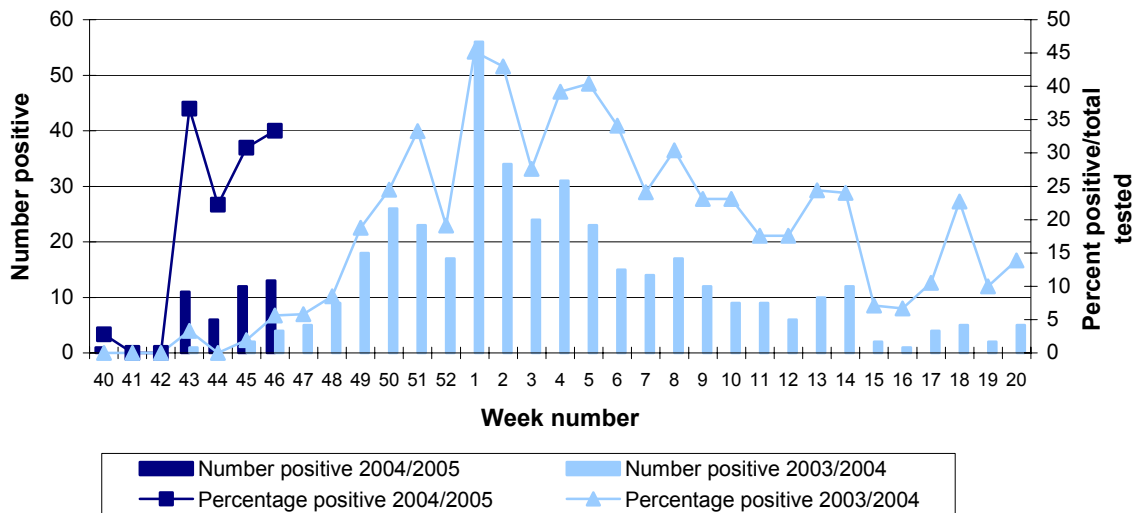


Figure 3. Number and percentage of non-sentinel RSV positive specimens detected during the 2004/2005 and 2003/2004 influenza seasons.

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

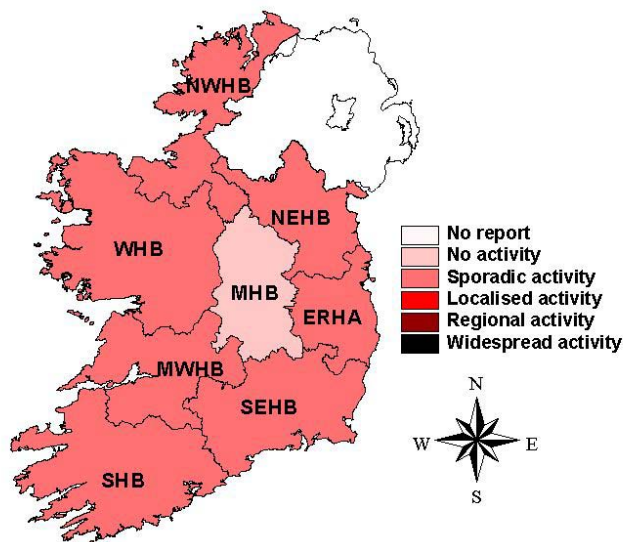


Figure 3: Map of influenza activity by health board/authority during week 45 2004/5

Influenza activity in Northern Ireland

Influenza activity levels increased in Northern Ireland during week 46. Forty-eight cases of ILI and four cases of clinical influenza were reported. These figures correspond to a rate of 3.1 per 100,000 population for clinical influenza and a rate of 38.9 per 100,000 population for influenza-like illness. This is a large increase from the updated rates of 1.4 and 17.7 per 100,000 population, respectively, for week 45. Returns were received from 21 out of 23 sentinel GP practices, giving a population coverage of 7.5%. No sentinel swabs and 30 non-sentinel swabs were tested. None were positive for influenza or RSV.

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

Influenza activity in England, Scotland and Wales

Low levels of influenza activity were reported throughout the UK during week 46. Rates of influenza-like-illness in England, Scotland and Wales were similar to those in week 45 and within baseline levels. During week 46, the ERNVL reference laboratory detected influenza in three specimens in England. Two were influenza A(H3N unsubtype) and the other was influenza A (H3N2). Levels of RSV continued to increase, with RSV detected in non-sentinel specimens in Wales (16) and in sentinel and non-sentinel specimens in England (109) and Scotland (36) during week 45.

<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 46, with sporadic activity reported by Ireland, England, France, Latvia and Scotland and no activity reported by all other countries. A non-sentinel specimen in France tested positive for influenza A (unsubtyped) and one non-sentinel specimen in Sweden and Latvia tested positive for influenza B. RSV was detected in 32 specimens in France, one specimen in the Czech Republic, sixteen specimens in the Netherlands and one specimen in Latvia.

Five influenza viruses have been antigenically and/or genetically characterised in Europe since week 40 2004. Four were A/Wellington/1/2004 (H3N2)-like (from England, France, Norway and Sweden) and one was A/Fujian/411/2002 (H3N2)-like (from Germany).

To date this season influenza A (H3N2), influenza A (H1N1), influenza A (unsubtyped) and influenza B have been detected in Europe, with most of the positive detections being in Western Europe. It is not yet possible to determine which types and strains will be dominant.

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

Influenza activity in Canada

During week 45 (week ending 6/11/2004), localised activity was reported in Alberta, due to an outbreak in a long-term care facility. Elsewhere in Canada ILI rates were low and the sentinel GP network reported an ILI rate of 16 cases per 100,000 population. In week 45, there were 15 influenza A and no influenza B detections. Since the start of the 2004/2005 influenza season, 22 influenza viruses have been antigenically characterised. Twenty-one were influenza A/Fujian/411/02(H3N2)-like and one was influenza B/Shanghai/361/02.

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

Influenza activity in the United States

Low levels of influenza activity were also seen in the US during week 44 (week ending 06/11/2004). All states reported either sporadic or no activity. WHO and NREVSS laboratories tested 958 specimens for influenza. One was positive for influenza A (H3N2), two were positive for influenza A (unsubtyped) and influenza B was detected in three samples. Since October 1st, three influenza A (H3N2) viruses have been antigenically characterised by the CDC. All were influenza A/Fujian/411/2002-like.

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

Influenza activity Worldwide

During week 46, sporadic influenza activity was reported by China (2 A(H3), 4 A(unsubtyped) and 5 B) and the Ukraine (1 A(H3) and 1 A(H1)).

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

Influenza activity in Australia and New Zealand in 2004 peaked late in the season (in week 38) and is now at very levels. During the 2004 season, a total of 836 influenza isolates were identified in New Zealand. Of these, 55.4% were A/Fujian/411/02(H3N2)-like, 33.1% were A (unsubtyped), 4.1% were A/Wellington/1/2004 (H3N2)-like, 0.1% were A/New Caledonia/20/99(H1N1), 4.2% were influenza B (not typed), 1.7% were B/Sichuan/379/99 and 1.4% were B/Shanghai/361/02.

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

http://www.surv.esr.cri.nz/virology/influenza_weekly_update.php

Avian influenza

On October 29th, the WHO issued a warning that domestic ducks might be acting as a silent reservoir for the H5N1 virus. A recent laboratory study showed that domestic ducks were shedding the virus for longer time periods than in 2003 and that most showed no symptoms of illness. This report and other recent evidence indicate that the H5N1 virus circulating in some parts of Asia has increased its pathogenicity in chickens and mice and expanded its host range to include mammals such as felines. To date, no evidence has linked human H5N1 cases to exposure to asymptomatic ducks.

Thailand

Since the beginning of 2004, Thailand has reported 17 laboratory confirmed cases of human infection with avian influenza A (H5N1). Twelve of these have been fatal. There is no evidence that efficient and sustained human-to-human transmission is currently occurring in Thailand.

Viet Nam

Since January 2004, Viet Nam has reported 27 laboratory confirmed cases of human infection with avian influenza A (H5N1). Twenty of these have been fatal. 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/>