

Weekly Influenza Surveillance Report



Week 14 2004

**Week starting Monday 29th March 2004 &
ending Sunday 04th April 2004**

Report produced: 08/04/2004

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

Summary

GP consultation rates for influenza-like illness in Ireland remain at low levels during week 14, with no influenza positive specimens detected by the NVRL from any source since week 7.

Clinical data

During week 14 2004 (the week ending the 4th of April 2004), three influenza-like illness (ILI) cases were reported from sentinel general practices, corresponding to an ILI consultation rate of 3.5 per 100,000 population, increasing from a rate of 1.1 per 100,000 population in week 13 (figure 1). Twenty-eight of the sentinel general practices reported during week 14, with one reporting ILI. The rates for weeks 6 to 14 have been the lowest rates reported for these weeks for any season since surveillance began in 2000.

During week 14, no ILI cases were reported in 5-14 year olds or in those aged 65 years of age or older. ILI rates per 100,000 increased in the 0-4 and 15-64 year age groups, compared to the previous week, to 16.6 and 3.5 per 100,000 population, respectively (figure 2). It is important to note that 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.

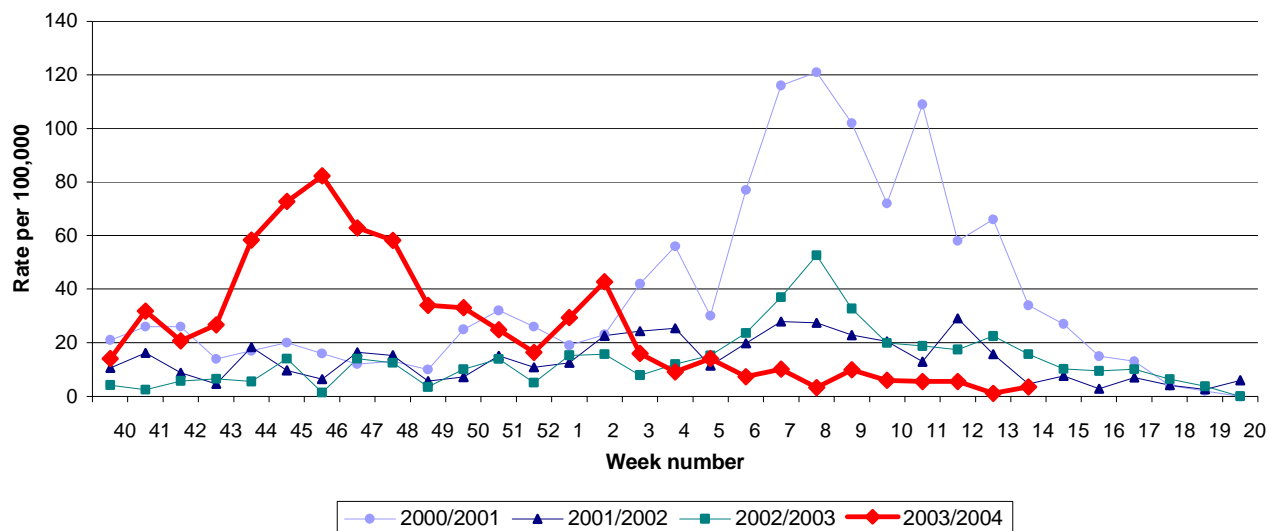


Figure 1: GP consultation rate for influenza-like illness per 100,000 population by report week, during the 2000/2001, 2001/2002, 2002/2003 & 2003/2004-influenza seasons.

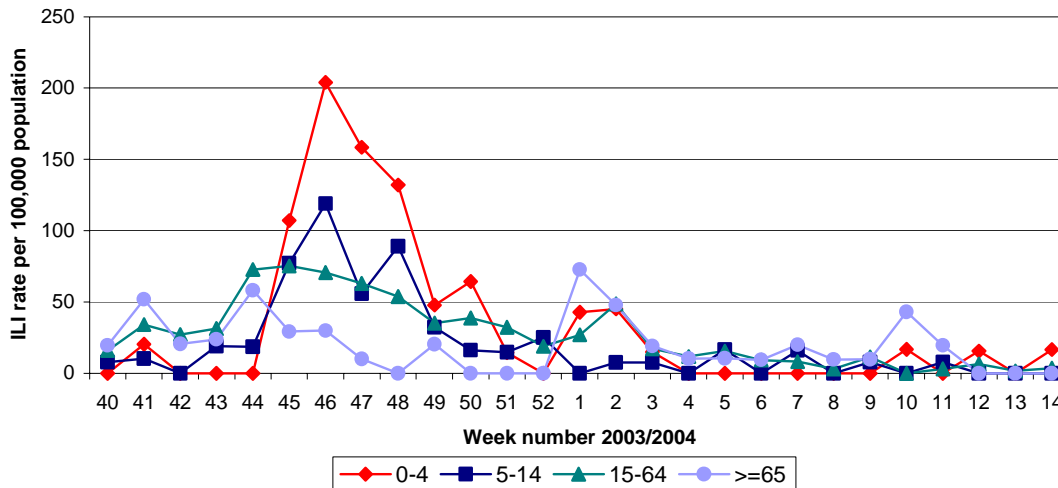


Figure 2: Age specific GP consultation rate for ILI per 100,000 population by week for the 2003/2004-influenza season. *The denominator used in the age specific consultation rate is from the 2002 census data; this assumes that the age distribution of the sentinel general practices is similar to the national age distribution.*

Virological data from the National Virus Reference Laboratory

During week 14, the National Virus Reference Laboratory (NVRL) received one swab from sentinel GPs, the result of which is pending (table 1). The total number of positive influenza swabs from sentinel GPs for the 2003/2004 season to date is 149: 6 influenza A (unsubtyped), 136 influenza A (H3N2) and 7 influenza B viruses (figure 3).

The NVRL tested 50 respiratory non-sentinel specimens mainly from hospitals and some GPs during week 14, no specimens were positive for influenza A or B, 12 specimens were positive for respiratory syncytial (RSV) virus, one was positive for adenovirus and one was positive for parainfluenza virus (PIV) type-3 (table 2). Between weeks 40 2003 and 14 2004, a total of 1698 respiratory non-sentinel specimens have been tested by the NVRL, 95 were positive for influenza A, 14 for influenza B, 377 RSV, 5 adenovirus, 6 PIV-1, 5 PIV-2 and 20 PIV-3. Of the 95 influenza A positive non-sentinel specimens detected this season, 64 cases were in the 0 to 4 year age group, 6 were 5-14, 21 were 15-64, one was aged 65 years or older and three were of unknown age group. The total number of RSV positive specimens for the 2003/2004 season is represented in figure 4.

The total number of influenza positive specimens from all sources (sentinel and non-sentinel) this season is 258: 237 influenza A and 21 influenza B (table 3). Influenza positive specimens by health board are detailed in table 4. Seventy-five influenza positive cases this season were in the 0 to 4 year age group and 31 were in the 5-14 year age group. Detection of influenza in younger age groups is not unexpected as there has been very little influenza in circulation for the last few seasons, therefore the opportunity for development of immunity has been limited. One hundred and forty-two influenza positive specimens this season were in cases aged between 15 and 64 years of age, 6 cases were 65 years or older and 4 cases were of unknown age group.

Table 1: Total number of sentinel specimens tested for influenza and positive results by type and subtype for week 14 and the 2003/2004 season to date.

Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A (unsubtyped)	Influenza A (H3N2)	Influenza B
14	1 [#]	0	0.0	0	0	0
Total	348*	149	42.8	6	136	7

[#]Laboratory result is pending *Please note data for week 13 was updated

Table 2: Total number of non-sentinel** respiratory specimens and positive results for week 14 and the 2003/2004 season to date.

Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A	Influenza B	RSV
14	50	0	0.0	0	0	12
Total	1698	109	6.4	95	14	377

Table 3: Total number of sentinel and non-sentinel** respiratory specimens and positive results for week 14 and the 2003/2004 season to date.

Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A	Influenza B	RSV
14	51	0	0.0	0	0	10
Total	2046	258	12.6	237	21	377

Table 4: Total number of sentinel and non-sentinel** influenza A and B positive specimens by health board for week 14 2004 and the 2003/2004 season to date

	Week 14 2004			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
ERHA	0	0	0	117	9	126
MHB	0	0	0	9	2	11
MWHB	0	0	0	20	1	21
NEHB	0	0	0	35	3	38
NWHB	0	0	0	16	0	16
SEHB	0	0	0	20	3	23
SHB	0	0	0	11	0	11
WHB	0	0	0	9	3	12
Total	0	0	0	237	21	258

** 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.

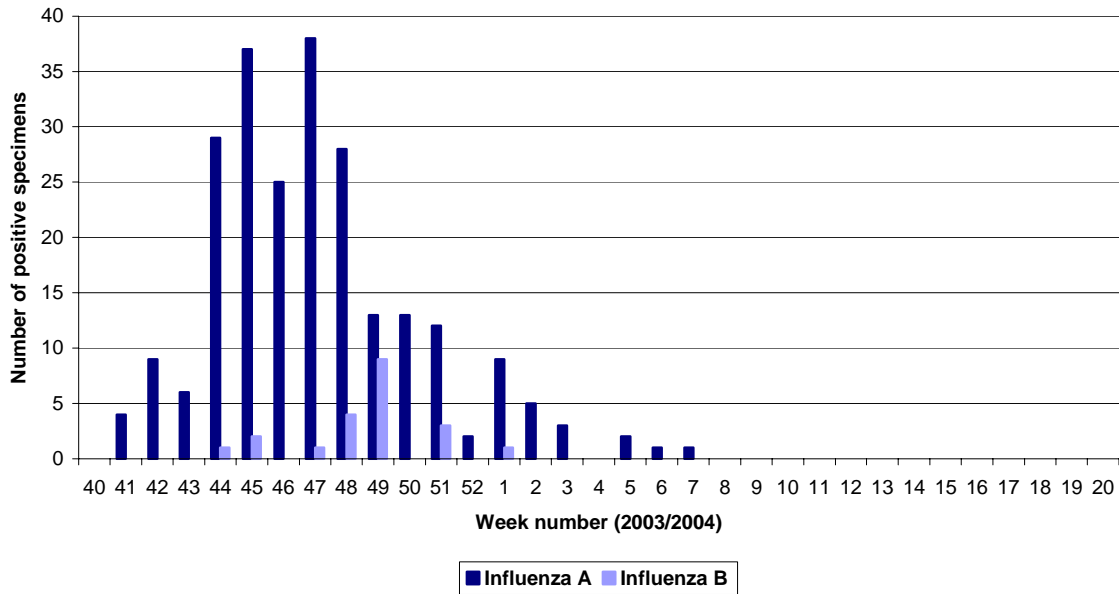


Figure 3: Number of positive influenza A and B sentinel and non-sentinel specimens tested by the NVRL by week number for the 2003/2004 season

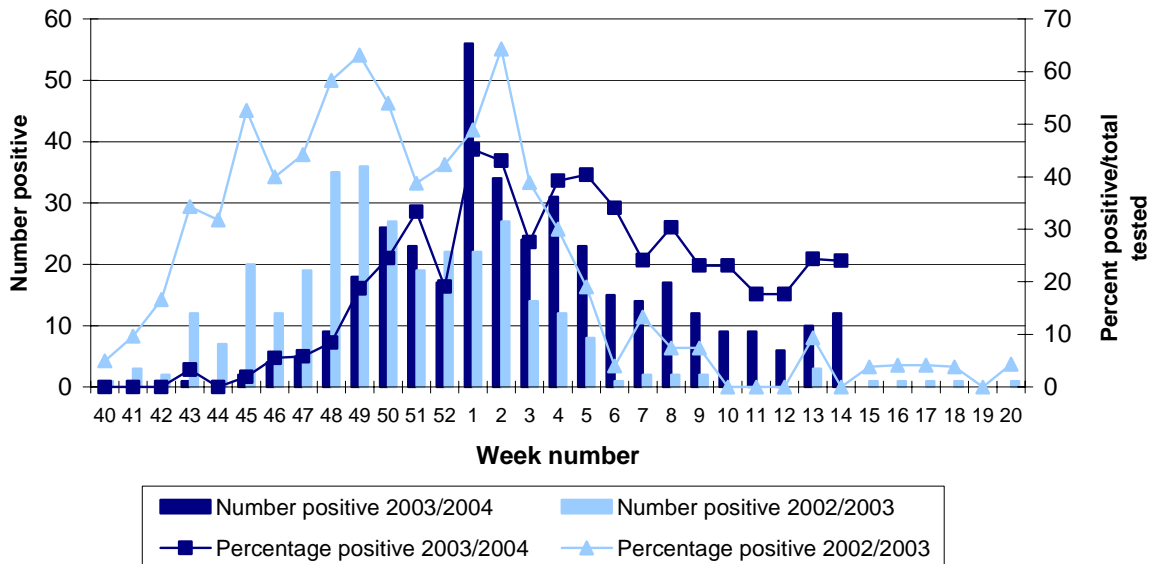


Figure 4: Number and percentage of non-sentinel RSV positive specimens detected during the 2003/2004 and 2002/2003 influenza seasons.

Antigenic characterisation

To date this season, 8 influenza A (H3N2) samples were sequenced at the NVRL and phylogenetic analysis was carried out at Mill Hill laboratories. All 8 samples were characterized as A/Fujian/411/2002-like strains. This year some antigenic drift has been detected in the A (H3N2) strains circulating in Europe, America, Australia and New Zealand. The A/Fujian-like strains are related to the A/Panama-like strain

included in the current 2003/2004 vaccine and antibodies induced against this vaccine strain cross-react with A/Fujian-like strains, but generally to a reduced level. The current vaccine should give good protection against the virus strains in the vaccine, and it is also likely to give significant protection against the A/Fujian strain. The current vaccine is the best protection for those aged 65 years and over and in at risk groups.

School outbreak reports & sentinel school absenteeism data

To date this season, a total of 4 school outbreaks associated with ILI have been reported to NDSC. No increased absenteeism associated with ILI was reported to NDSC during weeks 13 and 14.

Sentinel hospital admissions data

There were no increases reported in RTI admissions from sentinel hospitals during weeks 13 and 14.

Mortality data

To date this season, two influenza-associated deaths in 0-4 year olds have been reported to NDSC, one in week 47 and one in week 48.

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, and/or sentinel hospital admissions data, and/or sentinel school absenteeism data. During week 13, the ERHA reported sporadic influenza activity and the remaining health boards reported no activity (fig. 2).

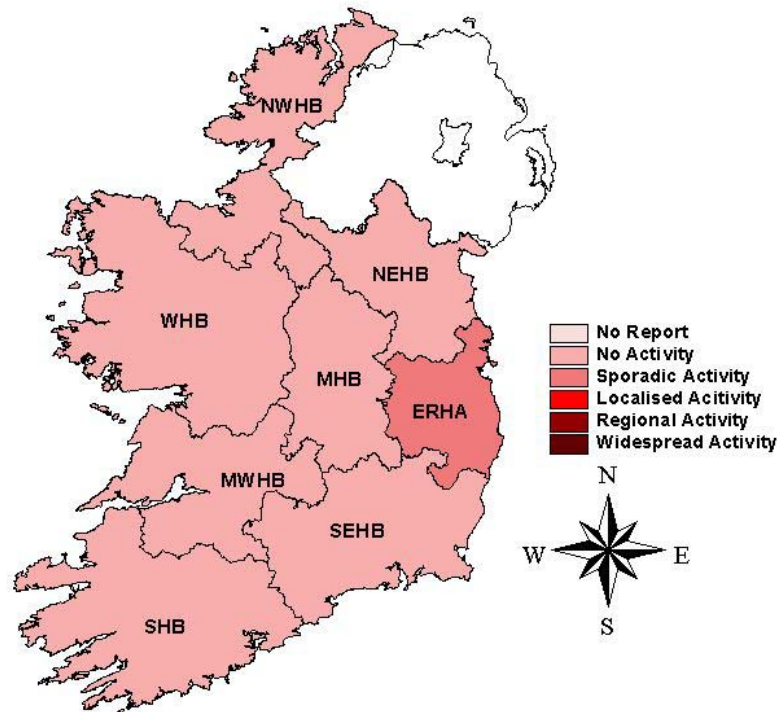


Figure 2: Map of influenza activity by health board/authority during week 13 2004.

Influenza activity in Northern Ireland

Week 14 data was not available at the time of publication of this report.

Influenza activity in Northern Ireland remained at low levels during week 13. The GP combined ILI and clinical influenza consultation rate for week 13 was 23.7 per 100,000, a slight increase from the updated rate of 17.3 per 100,000 during week 12. No influenza viruses were detected during week 13. <http://www.cdscni.org.uk/>

Influenza activity in England, Scotland and Wales

GP consultation rates for ILI in England, Scotland and Wales remain low and are within baseline threshold levels. There were no influenza A detections reported by the ERNVL during week 14.

http://www.hpa.org.uk/infections/topics_az/influenza/fluactivity0304.htm

Influenza activity in Europe

During week 13, the intensity of influenza activity was low in Europe with localised activity reported only in Italy. Sporadic activity was reported by seven networks and no influenza activity by 12 networks. Only sporadic cases of laboratory confirmed influenza A (unsubtyped), A (H3N2) and B were reported in Germany, Italy, Norway and Spain. <http://www.eiss.org/>

Influenza activity in Canada

During week 13, influenza activity remained low across Canada, with reports of sporadic activity in British Columbia, Alberta, Ontario, Quebec and Nova Scotia. Across Canada, during week 13, sentinel physicians reported 16 cases of ILI per 1000 patient visits, which is below the expected range for this time of year. Health Canada received 1,745 reports of laboratory tests for influenza, including 24 (1.4%) influenza A detections and 13 (0.75%) influenza B detections. To date this season influenza A/Fujian/411/2002 (H3N2)-like viruses remain predominant.

<http://www.hc-sc.gc.ca/pphb-dgsp/fluwatch/index.html>

Influenza activity in the United States

Influenza activity in the United States remained low during week 12. The percentage of patient visits for ILI has remained below the national baseline for 11 consecutive weeks. During week 12, mortality due to pneumonia and influenza remained below the epidemic threshold. Nineteen states and Guam reported sporadic activity and 29 states, the District of Columbia, and New York City reported no influenza activity. During week 12, WHO and NREVSS laboratories reported 454 specimens tested for influenza viruses, 10 (2.2%) of which were positive.

<http://www.cdc.gov/ncidod/diseases/flu/fluvirus.htm>

Influenza activity Worldwide

During week 13, sporadic activity was reported in Argentina (4 A H3 & 3 A unsubtype), Chile (3 A unsubtype) and China (193 A H3, 12 A unsubtype & 2 B). Japan reported 3 influenza A (H3) and 1 influenza B virus detections, while New Caledonia reported 1 influenza A (unsubtype) virus detection.

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

Avian influenza

East and Southeast Asia

There is currently a widespread epidemic in East and Southeast Asia of highly pathogenic avian influenza (HPAI), caused by influenza A (H5N1) in animal populations, particularly domestic fowl and a variety of other birds, that poses a considerable potential human public health risk. 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/

US

Currently, there are detections of low pathogenic avian influenza in the eastern United States and a detection of highly pathogenic avian influenza in Texas. Each of these viruses is different from the strain of highly pathogenic avian influenza in Asia.

http://www.aphis.usda.gov/lpa/issues/ai_us/ai_us.html

Canada

Since February 2004, avian influenza has been detected on 18 farms in southern British Columbia (BC). The Government of Canada declared a control area in southern BC to prevent further disease spread. All commercial poultry flocks and other backyard birds in the control area will be depopulated in an effort to eradicate

avian influenza. Two human cases of avian influenza A (H7) have been reported in poultry workers. The symptoms of both cases have resolved.

Canada: <http://www.inspection.gc.ca/english/anima/heasan/disemala/avflu/avflue.shtml>

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/>

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/>

This report was produced by Dr Lisa Domegan & Dr Sarah Gee, NDSC