

Weekly Influenza Surveillance Report



Week 17 2004

**Week starting Monday 19th April 2004 &
ending Sunday 25th April 2004**

Report produced: 29/04/2004

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

Summary

Both clinical and virological indicators of influenza activity in Ireland remain at low levels. GP consultation rates for influenza-like illness remain low. No influenza virus positive specimens were detected by the NVRL during week 17.

Clinical data

During week 17 2004 (the week ending the 25th of April 2004), one influenza-like illness (ILI) case was reported from sentinel general practices, corresponding to an ILI consultation rate of 1.1 per 100,000 population, remaining unchanged from the rate of 1.1 per 100,000 in week 16 (figure 1). Twenty-eight of the sentinel general practices reported during week 17, with one reporting ILI. The rates for weeks 6 to 17 have been the lowest rates reported for these weeks for any season since surveillance began in 2000.

During week 17, no ILI cases were reported in 0-4, 5-14 and 15-64 year olds. One ILI case was reported in the age group 65 years or older, corresponding to a rate of 10.3 per 100,000 (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.

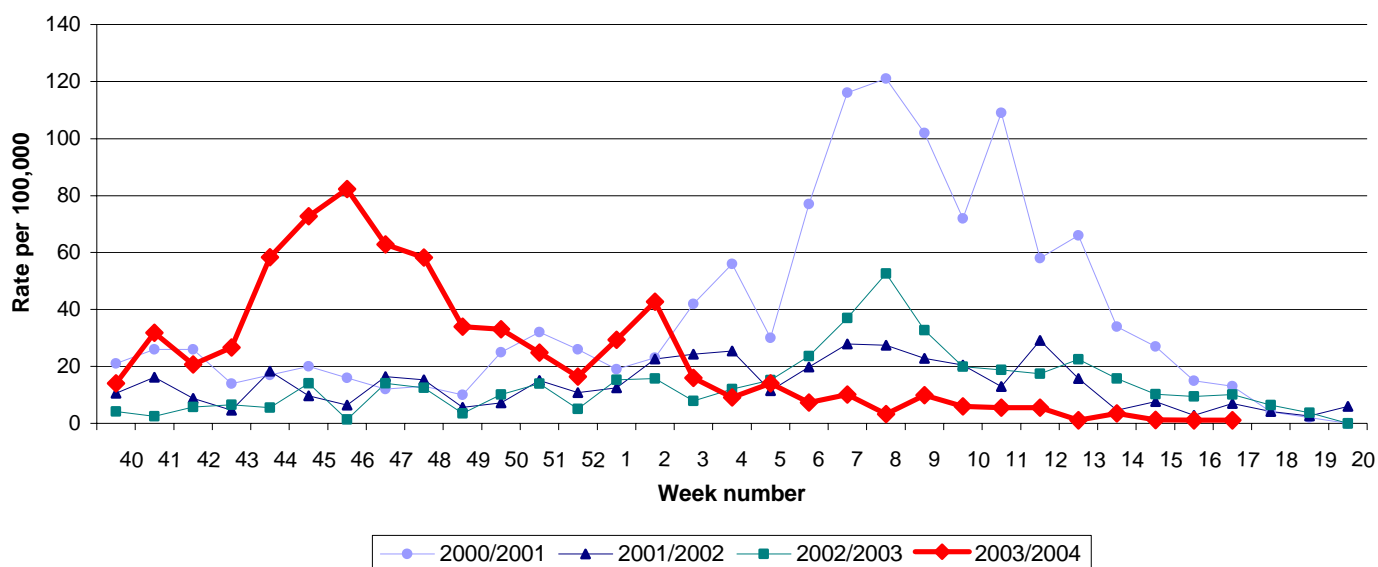


Figure 1: GP consultation rate for influenza-like illness per 100,000 population by report week, during the 2000/2001, 2001/2002, 2002/2003 & 2003/2004-influenza seasons.

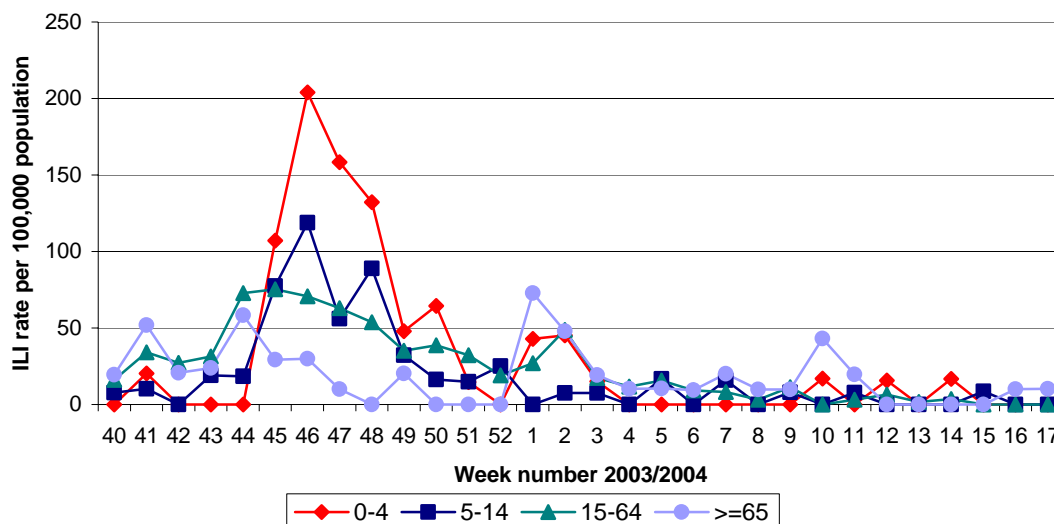


Figure 2: Age specific GP consultation rate for ILI per 100,000 population by week for the 2003/2004-influenza season. *The denominator used in the age specific consultation rate is from the 2002 census data; this assumes that the age distribution of the sentinel general practices is similar to the national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

Virological data from the National Virus Reference Laboratory

During week 17, the National Virus Reference Laboratory (NVRL) received one swab from sentinel GPs, which was negative (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 38 respiratory non-sentinel specimens mainly from hospitals and some GPs during week 17, no specimens were positive for influenza A or B, 4 specimens were positive for respiratory syncytial (RSV) virus, 3 were positive for Adenovirus and one was positive for parainfluenza virus (PIV) type-3 (table 2). Between weeks 40 2003 and 17 2004, a total of 1779 respiratory non-sentinel specimens have been tested by the NVRL, 97 were positive for influenza A, 14 for influenza B, 384 RSV, 8 adenovirus, 6 PIV-1, 5 PIV-2 and 25 PIV-3. Of the 97 influenza A positive non-sentinel specimens detected this season, 64 cases were in the 0 to 4 year age group, 6 were 5-14, 23 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. 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.

The total number of influenza positive specimens from all sources (sentinel and non-sentinel) this season is 260: 239 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-

four 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 17 and the 2003/2004 season to date.

Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A (unsubtyped)	Influenza A (H3N2)	Influenza B
17	1	0	0.0	0	0	0
Total	349	149	42.7	6	136	7

Table 2: Total number of non-sentinel** respiratory specimens and positive results for week 17 and the 2003/2004 season to date.

Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A	Influenza B	RSV
17	38	0	0.0	0	0	4
Total	1779	111	6.2	97	14	384

Table 3: Total number of sentinel and non-sentinel** respiratory specimens and positive results for week 17 and the 2003/2004 season to date.

Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A	Influenza B	RSV
17	39	0	0.0	0	0	4
Total	2128	260	12.2	239	21	384

Table 4: Total number of sentinel and non-sentinel** influenza A and B positive specimens by health board for week 17 2004 and the 2003/2004 season to date

	Week 17 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	22	1	23
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	239	21	260

** 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.

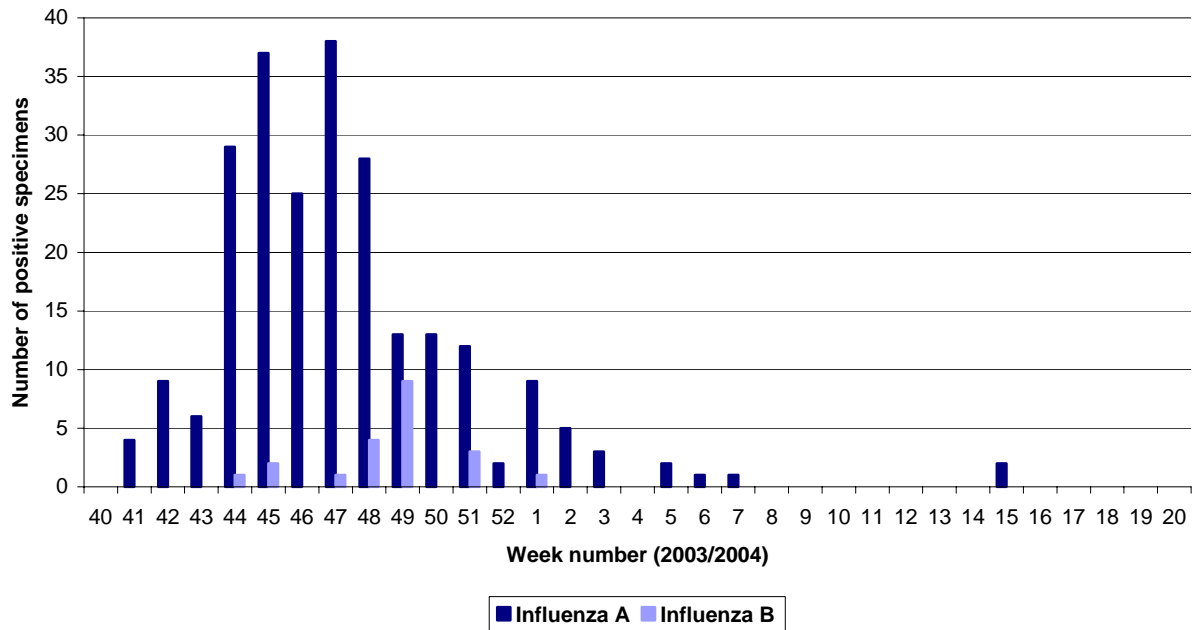


Figure 3: Number of positive influenza A and B sentinel and non-sentinel specimens tested by the NVRL by week number for the 2003/2004 season

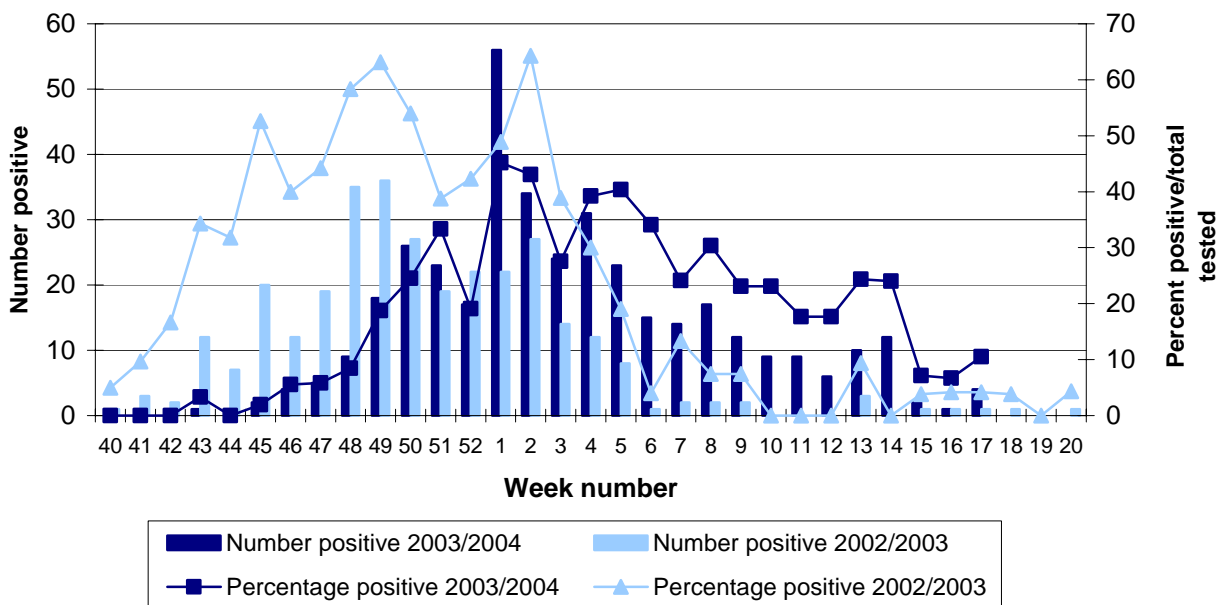


Figure 4: Number and percentage of non-sentinel RSV positive specimens detected during the 2003/2004 and 2002/2003 influenza seasons.

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 for weeks 16 or 17.

Sentinel hospital admissions data

There were no increases in RTI admissions from sentinel hospitals reported to NDSC during week 16 or 17.

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 16, the MWHB reported sporadic influenza activity and the remaining health boards reported no activity (fig. 2).

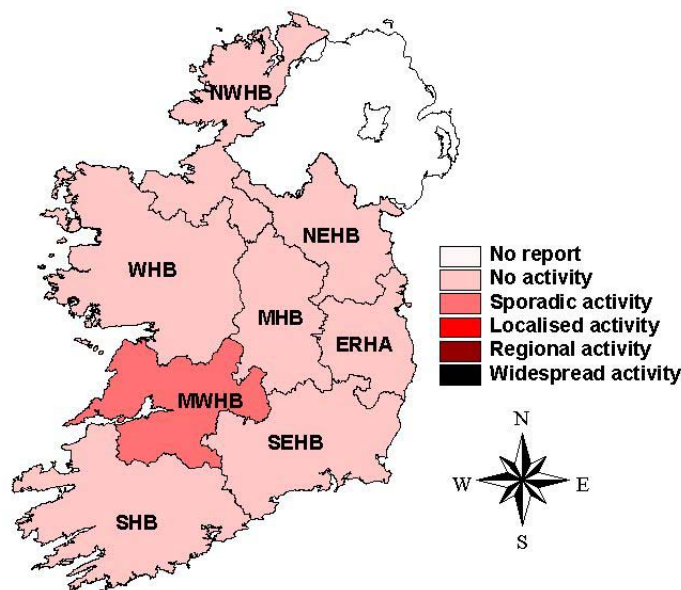


Figure 2: Map of influenza activity by health board/authority during week 16 2004.

Influenza activity in Northern Ireland

Influenza activity in Northern Ireland remained at low levels during week 17. The GP combined ILI and clinical influenza consultation rate for week 17 was 13.0 per 100,000, a slight increase on the updated rate of 8.2 per 100,000 for week 16. No influenza viruses have been detected in Northern Ireland since week 6. <http://www.cdscni.org.uk//>

Influenza activity in England, Scotland and Wales

Both clinical and virological indicators of influenza and other respiratory virus activity are currently low in England, Scotland and Wales. GP consultations for ILI in England, Wales and Scotland remain low and within baseline activity. During week 17, no influenza virus detections were reported from the ERNVL.

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

Influenza activity in Europe

The intensity of influenza activity in Europe was low in week 16. Sporadic activity was reported in England and Norway and no influenza activity was reported in 15 networks. Fourteen of 15 reporting networks reported decreasing or stable levels of clinical activity. Only the Slovak Republic reported an increase in clinical activity in week 16, but the incidence of ILI remained well below baseline levels. The total number of respiratory specimens collected by sentinel physicians in Europe in week 16 was 77, none of which were positive for influenza virus. Of the four detected influenza viruses in non-sentinel specimens, three were influenza B [two in England and one in Norway] and one was influenza A (unsubtyped) in France. The vast majority of characterised strains during the 2003/2004 season were influenza A/Fujian/411/2002 (H3N2)-like (96.7%). A small percentage of influenza B viruses were characterised (8.1%; 10/124) and the majority of these were B/Shanghai/361/002-like. The B/Shanghai/361/002-like viruses were mainly detected at the end of the season and this strain will be included in the 2004/2005 influenza vaccine.

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

Influenza activity in Canada

During week 16, sporadic activity was reported across Canada in parts of British Columbia, Alberta, Ontario, Quebec, New Brunswick and Nova Scotia. Sentinel physicians reported 20 cases of ILI per 1000 patient visits, which is below the expected range for this time of year. Health Canada received 1,528 reports of laboratory tests for influenza, including eight (0.52%) influenza A detections and 12 (0.79%) influenza B detections. The National Microbiology Laboratory has antigenically characterised 797 influenza viruses to date, 772/797 (96.9%) were influenza A viruses, including 744/772 (96.4%) A/Fujian/411/02 (H3N2)-like, 25 (3.2%) A/Panama/2007/99 (H3N2)-like, two A/NewCaledonia/20/99 (H1N1)-like and one H1N2. Twenty five (25/797) were influenza B viruses, including six B/Hong Kong/330/2001-like and 19 B/Sichuan/379/99-like. <http://www.hc-sc.gc.ca/pphb-dgspsp/fluwatch/index.html>

Influenza activity in the United States

Influenza activity remained low during week 15 in the US. The percentage of patient visits for ILI has remained below the national baseline since the week ending January 17. During week 15, mortality due to pneumonia and influenza remained below the

epidemic threshold. New York reported regional influenza activity, twelve states, New York City, Guam, and Puerto Rico reported sporadic activity and 35 states and the District of Columbia reported no influenza activity. During week 15, WHO and NREVSS laboratories reported 622 specimens tested for influenza viruses, 9 (1.4%) of which were positive. Of these, 3 were influenza A viruses (unsubtyped) and 6 were influenza B viruses. <http://www.cdc.gov/ncidod/diseases/flu/fluvirus.htm>

Influenza activity Worldwide

During week 16, localised influenza activity was reported in Chile (4 A H3 & 18 A unsubtyped) and sporadic activity was reported in China (163 A H3, 11 A unsubtyped & 2 B) and Argentina (10 A H3 & 1 A unsubtyped).

<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

Ongoing surveillance in Canada has led to the detection of avian influenza on 36 commercial poultry farms in the Fraser Valley region, British Columbia (BC). As of April 19th, an estimated 1 million birds have been found infected. Depopulation of poultry continues on a priority basis. As movement of people and equipment is likely contributing to the spread of avian influenza in the region, poultry owners are required to control access to their premises. Two human cases of avian influenza A (H7) have been reported in poultry workers. The symptoms of both cases have resolved. No additional confirmed human cases of H7 have been identified and follow-up is underway with individuals who have reported mild symptoms following possible exposure to avian influenza contaminated material.

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

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/Influenza>

This report was produced by Dr Lisa Domegan, NDSC