

Weekly Influenza Surveillance Report



Week 10 2004

**Week starting Monday 1st March 2004 &
ending Sunday 7th March 2004**

Report produced: 11/03/2004

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 10, with no influenza positive specimens detected by the NVRL from any source since week 7.

Clinical data

During week 10 2004 (the week ending the 7th of March 2004), five influenza-like illness (ILI) cases were reported from sentinel general practices, corresponding to an ILI consultation rate of 6.3 per 100,000 population, a decrease from the updated rate of 9.9 per 100,000 in week 9 (figure 1). Twenty-eight of the sentinel general practices reported during week 10, with four reporting ILI. The rates for weeks 6 to 10 have been the lowest rates reported for these weeks for any season since surveillance began in 2000.

During week 10, no ILI cases were reported in the 5-14 & 15-64 year olds. ILI rates per 100,000 increased during week 10 in the 0-4 year age group and in those aged 65 years or older. One ILI case was reported in the 0-4 year age group, corresponding to a rate of 17.7 per 100,000; this is the first case in a 0-4 year old since week 3. Four ILI cases were reported in those aged 65 years or older, corresponding to a rate of 45.1 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.

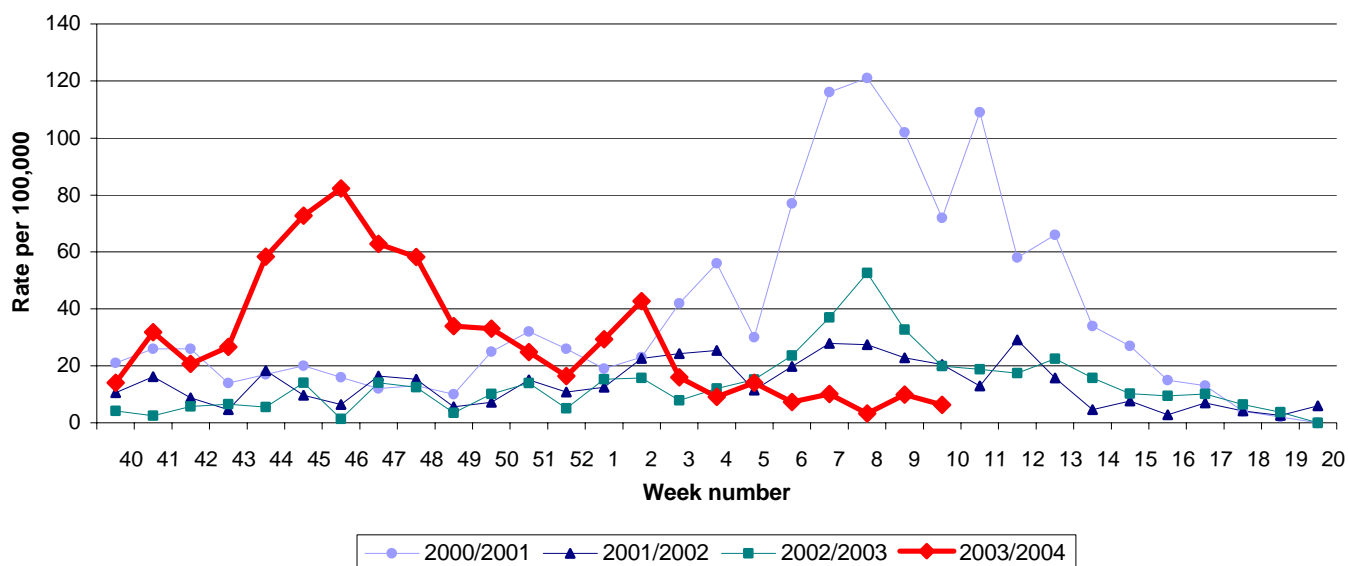


Figure 1: GP consultation rate for influenza-like illness per 100,000 population by report week, during the 2000/2001, 2001/2002, 2002/2003 & 2003/2004-influenza seasons.

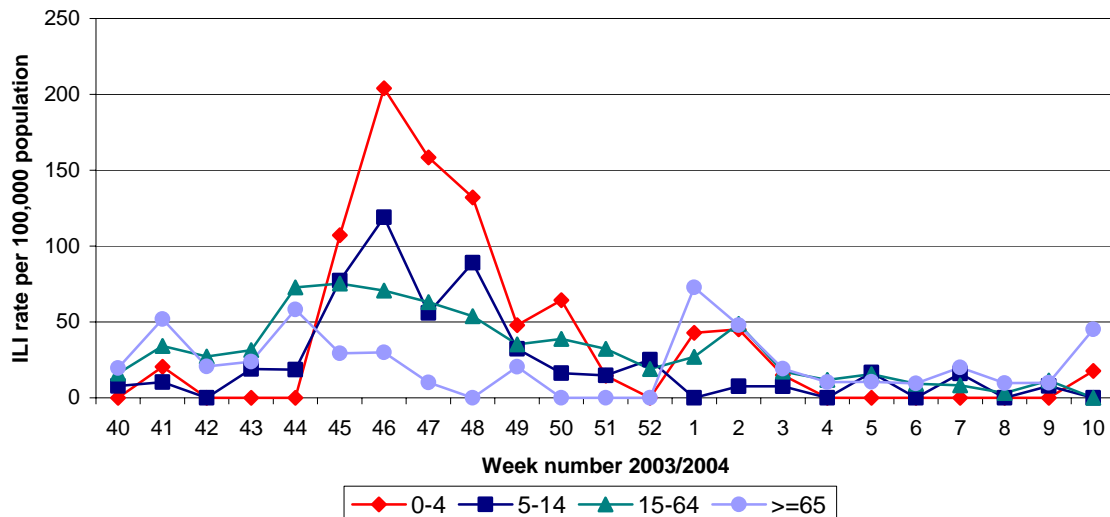


Figure 2: Age specific GP consultation rate for ILI per 100,000 population by week for the 2003/2004-influenza season. *The denominator used in the age specific consultation rate is from the 2002 census data; this assumes that the age distribution of the sentinel general practices is similar to the national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

Virological data from the National Virus Reference Laboratory

During week 10, the National Virus Reference Laboratory (NVRL) received 1 swab from sentinel GPs (table 1), which was negative for influenza virus. The total number of positive influenza swabs from sentinel GPs for the 2003/2004 season to date is 149: 7 influenza A (unsubtyped), 135 influenza A (H3N2) and 7 influenza B viruses.

The NVRL also tested 34 respiratory non-sentinel specimens mainly from hospitals and some GPs during week 10, no specimens were positive for influenza A or B and 7 specimens were positive for respiratory syncytial (RSV) virus. Between weeks 40 2003 and 10 2004, a total of 1517 respiratory non-sentinel specimens have been tested by the NVRL, 95 were positive for influenza A, 14 for influenza B, 340 RSV, 2 adenovirus, 5 PIV-1, 5 PIV-2 and 15 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 influenza positive specimens from all sources (sentinel and non-sentinel) this season is 258: 237 influenza A and 21 influenza B (table 2). 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 by week and positive results by type, subtype and report week for the 2003/2004-influenza season

Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A (unsubtyped)	Influenza A (H3N2)	Influenza B
10	1	0	0.0	0	0	0
Total	343	149	43.4	7	135	7

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

Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A	Influenza B	RSV
10	34	0	0.0	0	0	7
Total	1517	109	7.2	95	14	340

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

Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A	Influenza B	RSV
10	35	0	0.0	0	0	7
Total	1858	258	13.9	237	21	340

Table 4: Total number of sentinel and non-sentinel* influenza A and B positive specimens by health board for week 10 2004 and the 2003/2004 season to date

	Week 10 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.

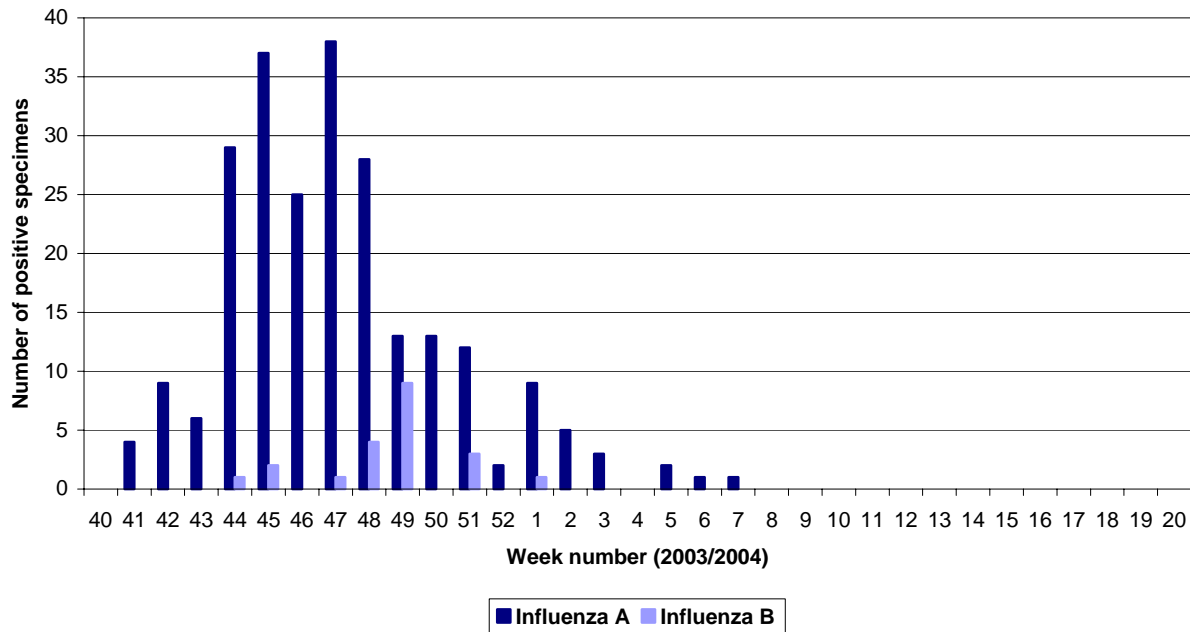


Figure 3: Number of positive influenza A and B sentinel and non-sentinel specimens tested by the NVRL by week number for the 2003/2004 season

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

To date this season, a total of 4 school outbreaks associated with ILI have been reported to NDSC.

Hospital admissions data

During week 9, respiratory admissions increased slightly compared to previous weeks, in 2 sentinel hospitals, one in the ERHA and one in the WHB. There were no reports of increased respiratory admissions during week 10.

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 9, the ERHA, SEHB & SHB reported sporadic influenza activity and the remaining health boards reported no activity (fig. 2).

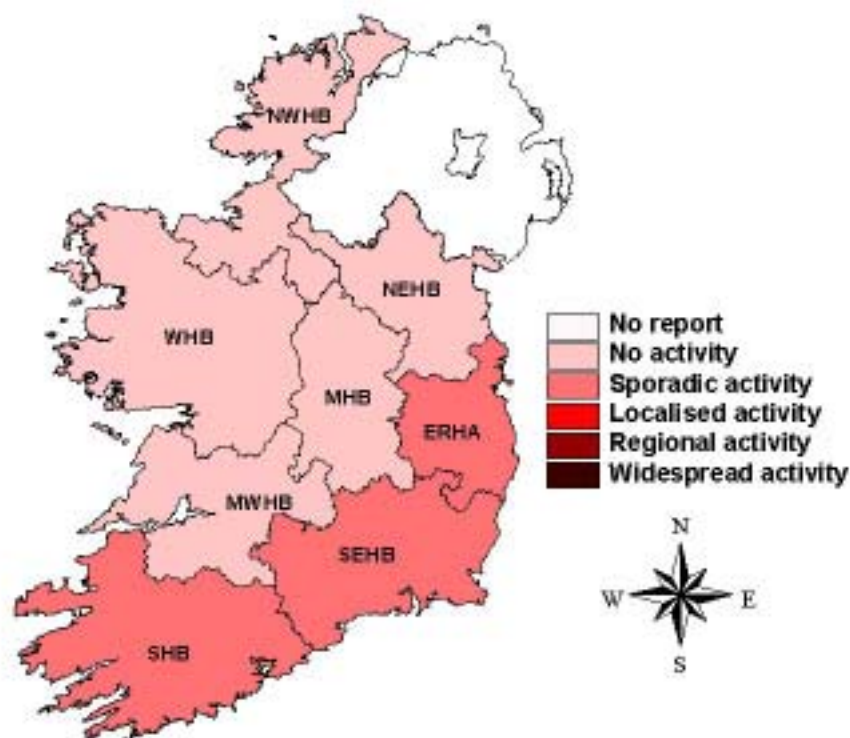


Figure 2: Map of influenza activity by health board/authority during week 9 2004.

Influenza activity in Northern Ireland

During week 10, sentinel general practices reported a combined influenza and ILI consultation rate of 21.5 per 100,000, a decrease from the updated rate of 29.7 per 100,000 in week 9. There were no laboratory confirmations of influenza during week 9 and data for week 10 was not available at the time of publication of this report.

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

Influenza activity in England, Scotland and Wales

GP consultation rates for ILI remained little changed in England at 8.7 per 100,000 in week 10, with the highest rates reported in 0-4 year olds. In Wales, 0.5 ILI cases per 100,000 were reported in week 10. In Scotland, the GP ILI consultation rate remained unchanged at 15.0 per 100,000 in week 10. There were no influenza A detections reported by the ERNVL during week 10.

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

Influenza activity in Europe

Influenza activity has continued to decrease in most European countries during week 9. Eighteen networks reported either no activity or sporadic influenza activity. Latvia reported localised activity and Germany, Italy and Switzerland reported regional activity. Among the sub-typed viruses, A/Fujian/411/2002 (H3N2)-like viruses remain predominant. <http://www.eiss.org/>

Influenza activity in Canada

In Canada during week 9, Quebec reported localised influenza activity, whereas Newfoundland, Ontario, Alberta and parts of British Columbia reported sporadic activity. Across Canada, during week 9, sentinel physicians reported 15 cases of ILI per 1000 patient visits, which is below the expected range for this time of year. Health Canada received 2,812 reports of laboratory tests for influenza, including 190 (6.8%) influenza A detections and seven influenza B detections. Influenza A/Fujian/411/2002 (H3N2)-like viruses remains predominant.

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

Influenza activity in the United States

Influenza activity remained low during week 8 (week of February 22-28 2004). The percentage of patient visits for ILI was below the national baseline. There were no reports of widespread or regional influenza activity from state and territorial epidemiologists during week 8. Five states reported localised activity, 32 states, New York City, the District of Columbia, Guam, and Puerto Rico reported sporadic activity and 12 states reported no influenza activity. Mortality due to pneumonia and influenza remained below the epidemic threshold (8.3%). During week 8, WHO and NREVSS laboratories reported 643 specimens tested for influenza viruses, 8 (1.2%) of which were positive. Of these, 3 were influenza A (H3N2), 3 were influenza A (unsubtyped) and 2 were influenza B. <http://www.cdc.gov/ncidod/diseases/flu/fluvirus.htm>

Influenza activity Worldwide

During week 9, no influenza activity was reported in Argentina and Chile. Sporadic activity was reported in China, associated with 117 A (H3), 3 A (unsubtyped) and one B influenza virus detections. Sporadic activity was also reported in the Russian Federation, associated with 2 influenza A (H3) virus detections. A localised outbreak was reported in Madagascar with 5 influenza A (H3) virus detections. In Japan, 21 influenza A (H3) and 2 influenza B viruses were detected during week 9.

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

Avian influenza in Asia

There is currently a widespread epidemic in East and South-East 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/

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/>

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