

Weekly Influenza Surveillance Report



Week 11 2004

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

Report produced: 18/03/2004

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

Clinical data

During week 11 2004 (the week ending the 14th of March 2004), five influenza-like illness (ILI) cases were reported from sentinel general practices, corresponding to an ILI consultation rate of 5.5 per 100,000 population, a decrease from the updated rate of 6.0 per 100,000 in week 10 (figure 1). Thirty of the sentinel general practices reported during week 11, with four reporting ILI. The rates for weeks 6 to 11 have been the lowest rates reported for these weeks for any season since surveillance began in 2000.

During week 11, no ILI cases were reported in 0-4 year olds. ILI rates per 100,000 increased in the 5-14 year age group and in the 15-64 year age group, to 7.8 and 3.2 per 100,000 population, respectively. ILI rates decreased in those aged 65 years or older to 19.6 per 100,000 in week 11 (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.

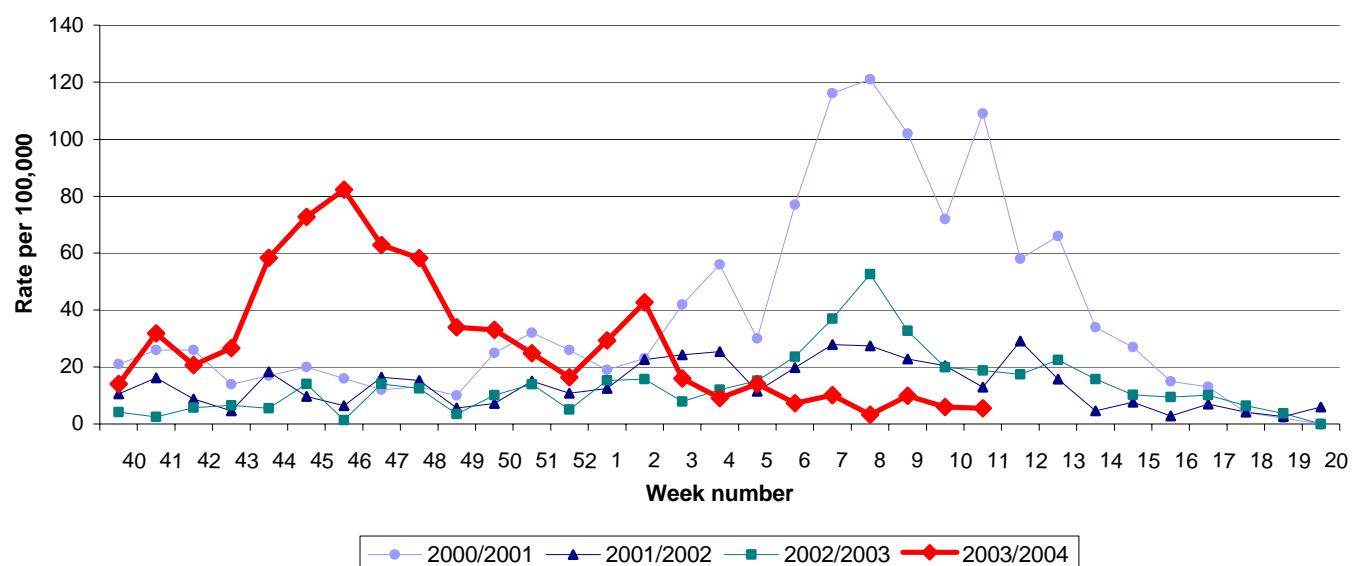


Figure 1: GP consultation rate for influenza-like illness per 100,000 population by report week, during the 2000/2001, 2001/2002, 2002/2003 & 2003/2004-influenza seasons.

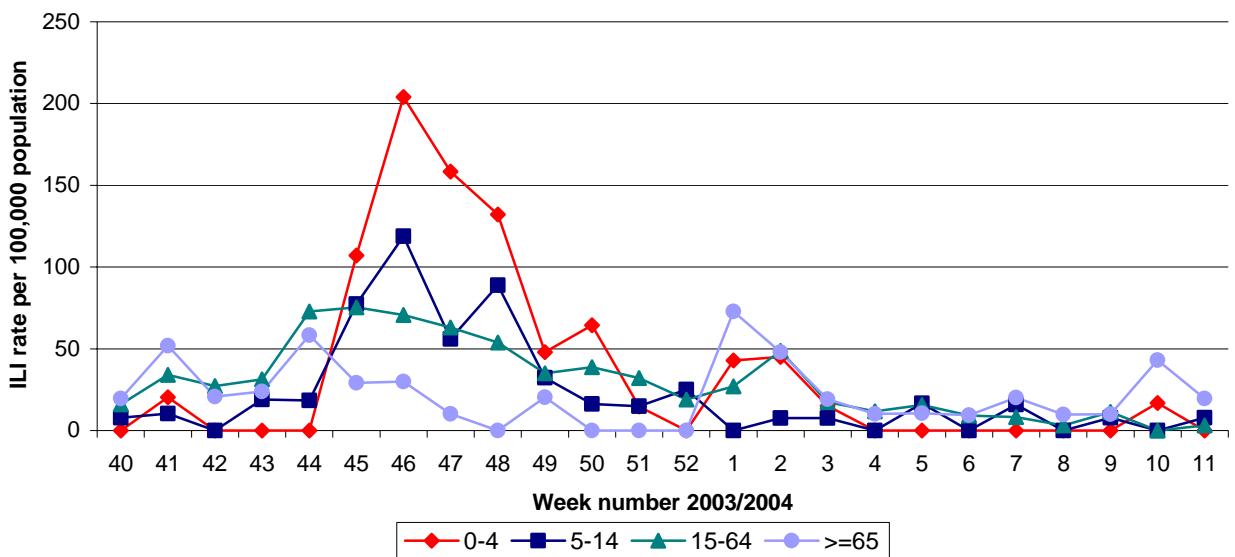


Figure 2: Age specific GP consultation rate for ILI per 100,000 population by week for the 2003/2004-influenza season. *The denominator used in the age specific consultation rate is from the 2002 census data; this assumes that the age distribution of the sentinel general practices is similar to the national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

Virological data from the National Virus Reference Laboratory

During week 11, the National Virus Reference Laboratory (NVRL) received no swabs from sentinel GPs (table 1). 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 tested 49 respiratory non-sentinel specimens mainly from hospitals and some GPs during week 11, no specimens were positive for influenza A or B and 8 specimens were positive for respiratory syncytial (RSV) virus. Between weeks 40 2003 and 10 2004, a total of 1570 respiratory non-sentinel specimens have been tested by the NVRL, 95 were positive for influenza A, 14 for influenza B, 350 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
11	0	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
11	49	0	0.0	0	0	8
Total	1570	109	6.9	95	14	350

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
11	49	0	0.0	0	0	8
Total	1913	258	13.5	237	21	350

Table 4: Total number of sentinel and non-sentinel* influenza A and B positive specimens by health board for week 11 2004 and the 2003/2004 season to date

	Week 11 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.

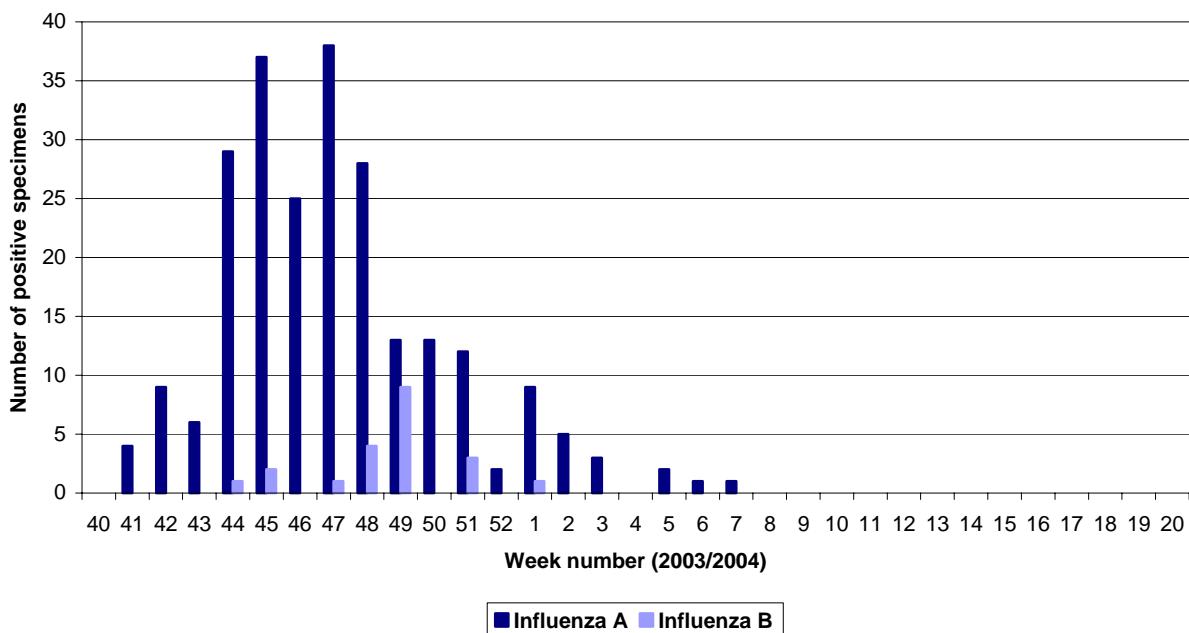


Figure 3: Number of positive influenza A and B sentinel and non-sentinel specimens tested by the NVRL by week number for the 2003/2004 season

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 & sentinel school absenteeism data

To date this season, a total of 4 school outbreaks associated with ILI have been reported to NDSC. The mean absenteeism levels for sentinel secondary schools in the SEHB increased slightly during week 10, compared to recent weeks.

Sentinel hospital admissions data

During week 11, the proportion of RTI admissions compared to total admissions increased slightly in a sentinel hospital in the WHB, compared to recent weeks.

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 10, the SEHB, NEHB & WHB reported sporadic influenza activity and the remaining health boards reported no activity (fig. 2).

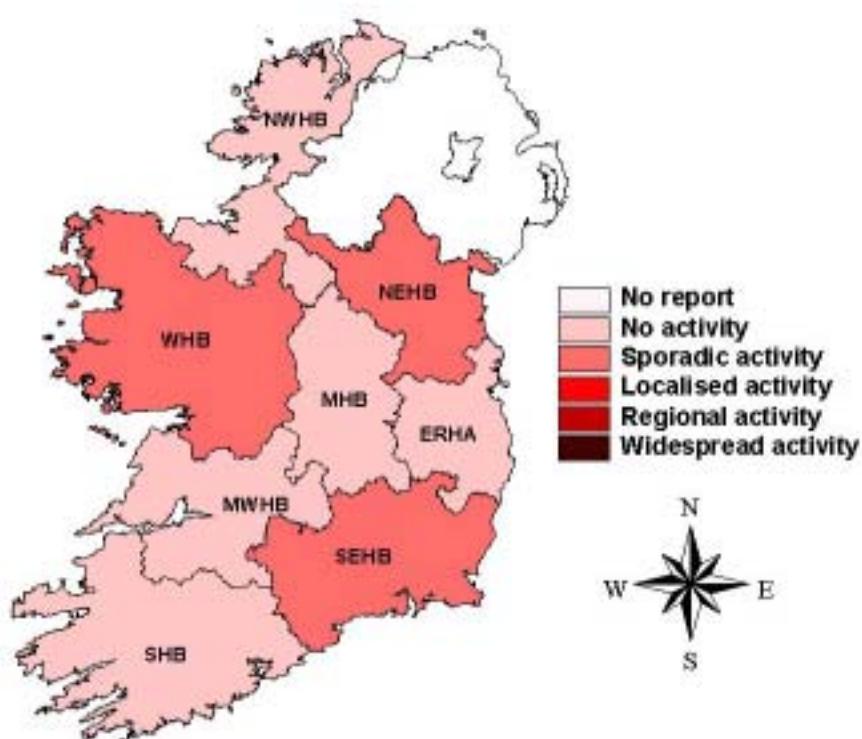


Figure 2: Map of influenza activity by health board/authourity during week 10 2004.

Influenza activity in Northern Ireland

Influenza activity in Northern Ireland remains at low levels during week 11. The GP combined ILI and clinical influenza consultation rate for week 11 was 21.7 per 100,000. No influenza viruses were detected during week 11.

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

Influenza activity in England, Scotland and Wales

GP consultation rates for ILI decreased slightly in England to 7.9 per 100,000 in week 11, with the highest rates reported in 15-44 year olds. In Wales, 0.0 ILI cases per 100,000 were reported in week 11. In Scotland, the GP ILI consultation rate decreased to 8.0 per 100,000 in week 11. There was no influenza A detections reported by the ERNVL during week 11.

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

Influenza activity in Europe

During week 10, influenza activity has continued to decrease throughout Europe, with only Germany and Italy reporting regional activity. Ten per cent of virological specimens collected during week 10 in Europe were positive for influenza. Two B/Shanghai/361/2002-like viruses have been isolated in Norway (these are the first reported in Europe this winter). Among the sub-typed viruses, A/Fujian/411/2002 (H3N2)-like viruses remain predominant. <http://www.eiss.org/>

Influenza activity in Canada

During week 10, localised influenza activity was reported in Quebec and parts of Nova Scotia and Newfoundland while the rest of Canada reported either sporadic or no activity. Across Canada, during week 10, sentinel physicians reported 14 cases of ILI per 1000 patient visits, which is below the expected range for this time of year. Health Canada received 2,511 reports of laboratory tests for influenza, including 145 (5.8%) influenza A detections and 17 influenza B detections. Influenza A/Fujian/411/2002 (H3N2)-like viruses remain predominant. <http://www.hc-sc.gc.ca/phhb-dgspsp/fluwatch/index.html>

Influenza activity in the United States

Influenza activity remained low during week 9, with the percentage of patient visits for ILI below the national baseline. During week 9, mortality due to pneumonia and influenza remained below the epidemic threshold. There were no reports of widespread or regional influenza activity from state and territorial epidemiologists during week 9. Two states reported local activity, 31 states, New York City, Guam, and Puerto Rico reported sporadic activity and 17 states and the District of Columbia reported no influenza activity. WHO and NREVSS laboratories reported 713 specimens tested for influenza viruses, 5 (0.7%) of which were positive: 2 A (H3N2), 1 A (unsubtyped) and 2 B. Of the 668 influenza viruses antigenically characterised this season, influenza A/Fujian/411/2002 (H3N2)-like viruses are predominant. <http://www.cdc.gov/ncidod/diseases/flu/fluviruses.htm>

Influenza activity Worldwide

During week 10, no influenza activity was reported in Argentina. Sporadic activity was reported in China (129 A H3, 4 A unsubtyped & 3 B) and Chile (1 A unsubtyped). Localised activity was reported in Madagascar (5 A H3) and the Russian Federation. Japan reported regional influenza activity during week 10, associated with 17 influenza A (H3) and 2 influenza B viruses. <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

On the 12th of March, laboratory analysis confirmed the presence of highly pathogenic H7N3 avian influenza on a farm in southern British Columbia (BC). The risk to human health remains low. All birds will be disposed of in accordance with provincial regulations, environmental management practices and internationally accepted disease control guidelines. The Government of Canada declared a control area in southern BC to prevent further disease spread.

<http://www.inspection.gc.ca/english/animal-health/animal-diseases/avian-flu/avian-flu.shtml>

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/>