

Weekly Influenza Surveillance Report



Week 6 2004

**Week starting Monday 2nd February 2004 &
ending Sunday 8th February 2004**

Report produced: 12/02/2004

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

Summary

GP consultation rates for influenza-like illness in Ireland decreased slightly during week 6, to the lowest rate this season. Only one influenza A virus positive detection was reported in week 6. NDSC continues to closely monitor occurrences of avian influenza A (H5N1) outbreaks in Asia. Human cases and deaths have been reported in Vietnam and Thailand.

Clinical data

During week 6 2004 (the week ending the 8th of February 2004), 7 influenza-like illness (ILI) cases were reported from sentinel general practices, corresponding to an ILI consultation rate of 7.7 per 100,000 population, a decrease from the rate of 14.1 per 100,000 in week 5 (figure 1). Thirty of the sentinel general practices reported during week 6, with only 5 reporting ILI.

During week 6, no ILI cases were reported in 0-4 and 5-14 year olds. ILI rates per 100,000 population decreased slightly in 15-64 year olds and in those aged 65 years or older during week 6 (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.

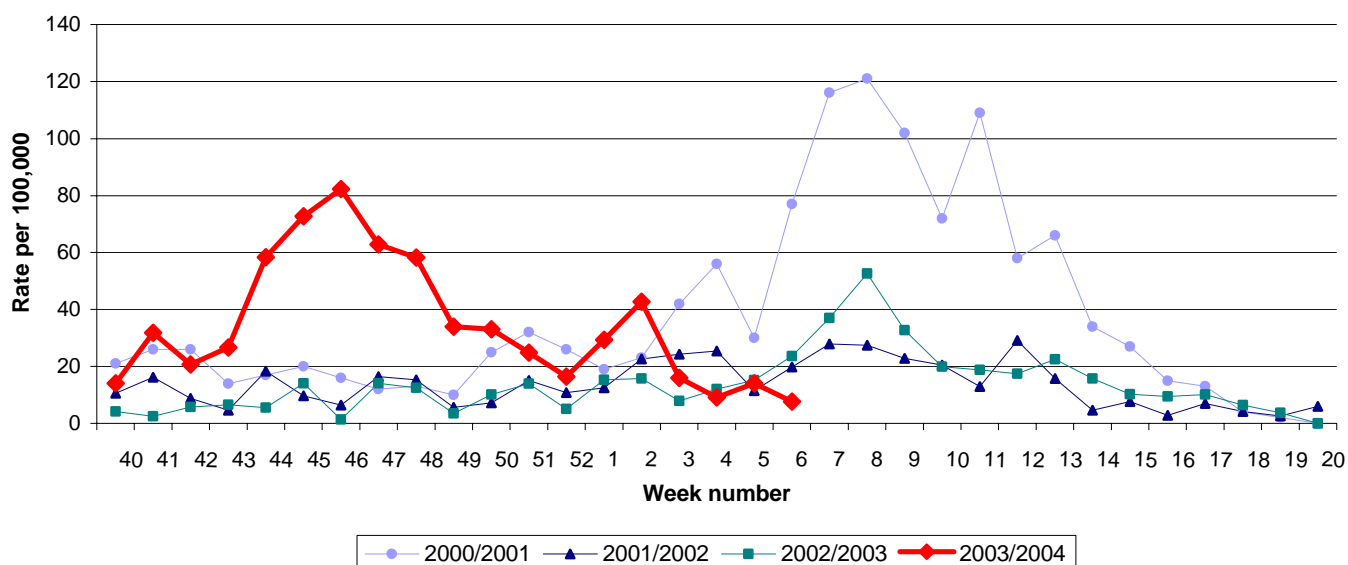


Figure 1: GP consultation rate for influenza-like illness per 100,000 population by report week, during the 2000/2001, 2001/2002, 2002/2003 & 2003/2004-influenza seasons.

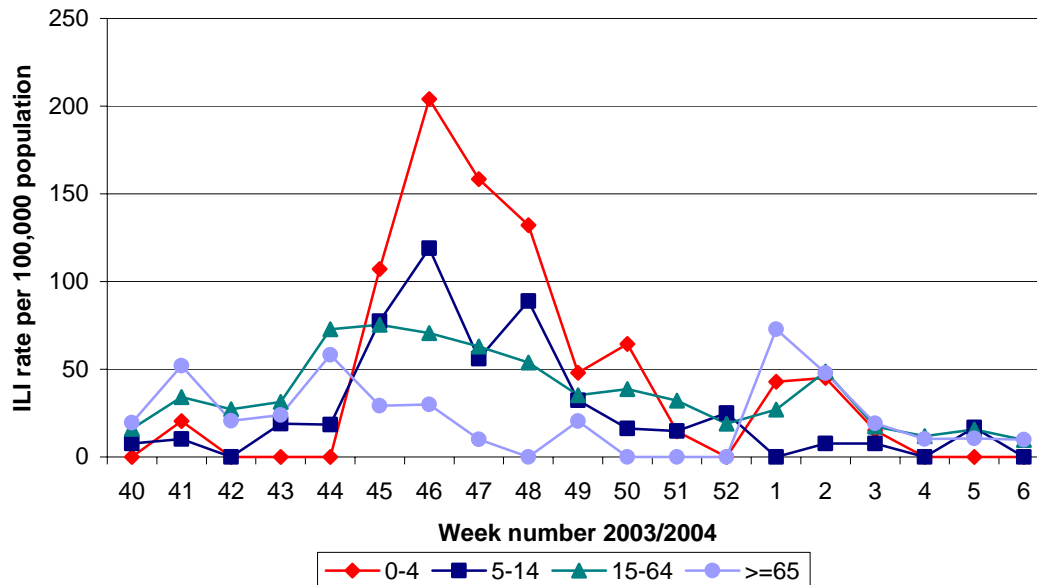


Figure 2: Age specific GP consultation rate for ILI per 100,000 population by week for the 2003/2004-influenza season. *The denominator used in the age specific consultation rate is from the 2002 census data; this assumes that the age distribution of the sentinel general practices is similar to the national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

Virological data from the National Virus Reference Laboratory

During week 6, the National Virus Reference Laboratory (NVRL) received 3 swabs from sentinel GPs (table 1), one of these was positive for influenza A. The total number of positive influenza swabs from sentinel GPs for the 2003/2004 season to date is 148: 18 influenza A (unsubtyped), 123 influenza A (H3N2) and 7 influenza B viruses.

The NVRL also tested 41 respiratory non-sentinel specimens mainly from hospitals and some GPs during week 6, no specimens were positive for influenza A or B and 12 specimens were positive for respiratory syncytial (RSV) virus. Between weeks 40 2003 and 6 2004, a total of 1311 respiratory non-sentinel specimens have been tested by the NVRL, 95 were positive for influenza A, 14 for influenza B, 285 RSV, 2 adenovirus, 5 PIV-1, 3 PIV-2 and 14 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 257: 236 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-one 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
40	9	0	0.0	0	0	0
41	12	4	33.3	0	4	0
42	14	7	50.0	0	7	0
43	10	4	40.0	0	4	0
44	37	24	64.9	0	23	1
45	48	27	56.3	0	25	2
46	38	16	42.1	0	16	0
47	37	20	54.1	0	20	0
48	32	17	53.1	1	15	1
49	18	7	38.9	0	5	2
50	17	4	23.5	0	4	0
51	13	7	53.8	6	0	1
52	5	2	20.0	2	0	0
1	5	2	40.0	2	0	0
2	13	3	23.1	3	0	0
3	5	1	20.0	1	0	0
4	3	0	0.0	0	0	0
5	5	2	40.0	2	0	0
6	3	1	33.3	1	0	0
Total	324	148	45.7	18	123	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 positive specimens
40	8	0	0.0	0	0	0
41	20	0	0.0	0	0	0
42	14	2	14.3	2	0	0
43	30	2	6.7	2	0	1
44	48	6	12.5	6	0	0
45	103	12	11.7	12	0	2
46	72	9	12.5	9	0	4
47	86	19	22.1	18	1	5
48	106	15	14.2	12	3	9
49	96	15	15.6	8	7	18
50	106	9	8.5	9	0	26
51	69	8	11.6	6	2	23
52	89	0	0.0	0	0	19
1	124	8	6.5	7	1	56
2	76	2	2.6	2	0	32
3	87	2	2.3	2	0	24
4	79	0	0.0	0	0	31
5	57	0	0.0	0	0	23
6	41	0	0.0	0	0	12
Total	1311	109	8.3	95	14	285

* 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 by week for the 2003/2004 season

Week number	Total specimens	Influenza positive specimens	% Influenza positive	Influenza A	Influenza B	RSV
40	17	0	0.0	0	0	0
41	32	4	12.5	4	0	0
42	28	9	32.1	9	0	0
43	40	6	15.0	6	0	1
44	85	30	35.3	29	1	0
45	151	39	25.8	37	2	2
46	110	25	22.7	25	0	4
47	123	39	31.7	38	1	5
48	138	32	23.2	28	4	9
49	114	22	19.3	13	9	18
50	123	13	10.6	13	0	26
51	82	15	18.3	12	3	23
52	94	2	2.1	2	0	19
1	129	10	7.8	9	1	56
2	89	5	5.6	5	0	32
3	92	3	3.3	3	0	24
4	82	0	0.0	0	0	31
5	62	2	3.2	2	0	23
6	44	1	2.3	1	0	12
Total	1635	257	15.7	236	21	285

Table 4: Total number of sentinel and non-sentinel* influenza A and B positive specimens by health board for week 6 2004 and the 2003/2004 season to date

	Week 6 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	34	3	37
NWHB	0	0	0	16	0	16
SEHB	0	0	0	20	3	23
SHB	1	0	1	11	0	11
WHB	0	0	0	9	3	12
Total	1	0	1	236	21	257

* 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.

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. During week 5, absenteeism in a sentinel secondary school in the ERHA increased significantly.

Hospital admissions data

There were no reports to NDSC of increased respiratory admissions during weeks 5 or 6 2004.

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 5, the ERHA, NEHB, SEHB, & MWHB all reported sporadic influenza activity and the remaining health boards reported no activity (fig. 2).

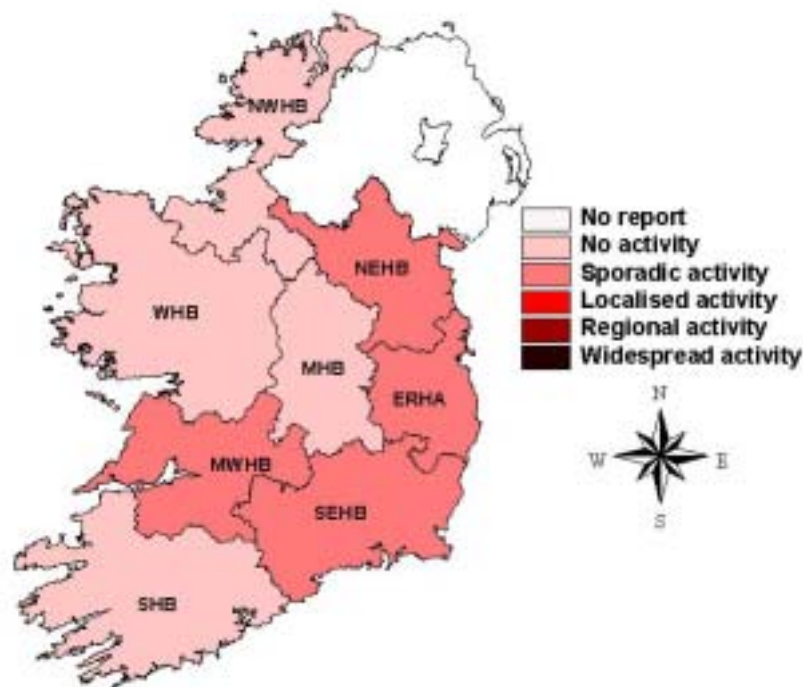


Figure 2: Map of influenza activity by health board/authority during week 5 2004.

Influenza activity in Northern Ireland

During week 6, sentinel general practices reported a combined influenza and ILI consultation rate of 32.6 per 100,000, an increase from the updated rate of 29.1 per 100,000 in week 5. Five influenza A (H3) positive specimens were detected during week 6 (four of which were in hospitalised children aged one year and under).

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

Influenza activity in England, Scotland and Wales

GP consultation rates for ILI remained little changed in England at 10.8 per 100,000 in week 5 and 15.1 per 100,000 in week 6. In Wales, ILI rates also remained little changed at 1.4 per 100,000 in week 5 and 0.9 per 100,000 in week 6. In Scotland, the GP ILI consultation rate increased slightly from 21.0 per 100,000 in week 5 to 24.0 per 100,000 in week 6. The number of specimens referred to the ERNVL remains at low levels, with no influenza isolations detected in week 6.

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

Influenza activity in Europe

Influenza activity increased in Central Europe, the Baltic States, Italy and Germany in week 5. Clinical incidence was highest among younger age groups (0-14), as observed earlier this season in Western Europe. Widespread influenza activity was reported in Italy and regional activity was reported in the Czech Republic, Germany, Latvia, Poland, and Switzerland. Local or sporadic activity was reported by 13 networks and no influenza activity by five networks. Among networks that have already experienced seasonal influenza activity, the clinical incidence has returned to baseline levels. The predominant virus circulating in Europe remains influenza A/Fujian/411/2002 (H3N2)-like. Ninety-one percent of the characterised influenza A isolates this season were A/Fujian/411/2002 (H3N2)-like. In the remaining 9%, A/Moscow/10/99 (H3N2)-like viruses and B viruses were most prominent. Of the 55 influenza B virus isolates, only six have been characterised and four of these were B/Sichuan/379/99-like, a strain not included in the current vaccine. This information is relevant for the discussions that will be held this week at WHO concerning the vaccine composition (northern hemisphere) for the 2004/2005 season.

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

Influenza activity in Canada

During week 5, widespread influenza activity was limited to Quebec, with the rest of the country reporting either sporadic or no activity. Across Canada, during the week 5, sentinel physicians reported 27 cases of ILI per 1000 patient visits, which is below the expected range for this time of year. Health Canada reported 465 (14.6%) influenza A detections and no influenza B detections during week 5. The predominant virus strain circulating in Canada remains influenza A/Fujian/411/2002 (H3N2)-like.

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

Influenza activity in the United States

Influenza activity remained low during week 4 2004 in the US. The percentage of patient visits for ILI remained below the national baseline. There were no reports of widespread influenza activity during week 4. Mortality due to pneumonia and influenza continued to decline, but remained above the epidemic threshold during

week 4. Seventy-six (6.3%) of 1,213 specimens tested by WHO and NREVSS collaborating laboratories were positive for influenza.

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

Influenza activity Worldwide

No influenza activity was reported in Argentina, Malaysia and Mexico during week 5. Sporadic activity was reported in Hong Kong (5 A untyped, 6 A/H3N2 & 4 B), Madagascar (4A/H3N2), Iceland (1 A untyped) and Chile (3 A untyped & 3 A/H3N2). Widespread activity was reported in the Russian Federation (1 A/H1N1 & 3 A/H3N2) and Japan (90 A/H3N2 & 2 B). The number of ILI cases in Japan is continuously increasing. The Republic of Korea reported one influenza A (H3N2) virus detection during week 5. <http://rhone.b3e.jussieu.fr/flunet/www/>

Avian influenza in Asia

NDSC continues to closely monitor occurrences of avian influenza A (H5N1) outbreaks in several Asian countries. Poultry outbreaks of influenza A (H5N1) have been confirmed in Vietnam, Thailand, South Korea, Laos, Japan, Cambodia, Indonesia and China. Additional countries have detected deaths in poultry flocks, and the cause is currently under investigation. The outbreaks have affected millions of chickens in these countries, as well as several human cases and deaths in Vietnam and Thailand. At present, no evidence indicates that efficient human-to-human transmission is occurring in Vietnam or elsewhere.

For the latest WHO update on these outbreaks:

http://www.who.int/csr/disease/avian_influenza/en/

For WHO FAQs on avian influenza:

http://www.who.int/csr/disease/avian_influenza/avian_faqs/en/

Northern Hemisphere influenza vaccine for the 2003/2004

On February the 28th 2003, WHO published a recommendation on the composition of influenza vaccines for use in the 2003-2004 Northern Hemisphere influenza season.

- A/New Caledonia/20/99(H1N1)-like virus
- A/Moscow/10/99(H3N2)-like virus*
- B/Hong Kong/330/2001-like virus**

*The widely used vaccine strain is A/Panama/2007/99

** Currently used vaccine strains include B/Shandong/7/97, B/Hong Kong/330/2001, B/Hong Kong/1434/2002

<http://www.emea.eu.int>

<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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