

Weekly Influenza Surveillance Report



Week 5 2004

**Week starting Monday 26th January 2004 & ending Sunday 1st
February 2004**

Report produced: 05/02/2004

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

Summary

GP consultation rates for influenza-like illness in Ireland increased slightly during week 5, with two influenza virus positive detections reported. NDSC continues to 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 5 2004 (the week ending the 1st of February 2004), 12 influenza-like illness (ILI) cases were reported from sentinel general practices, corresponding to an ILI consultation rate of 14.1 per 100,000 population, a slight increase from the rate of 9.1 per 100,000 in week 4 (figure 1). Thirty of the sentinel general practices reported during week 5, with only 9 reporting ILI.

During week 5, no ILI cases were reported in 0-4 year olds. ILI rates per 100,000 population increased slightly in all other age groups during week 5 (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.

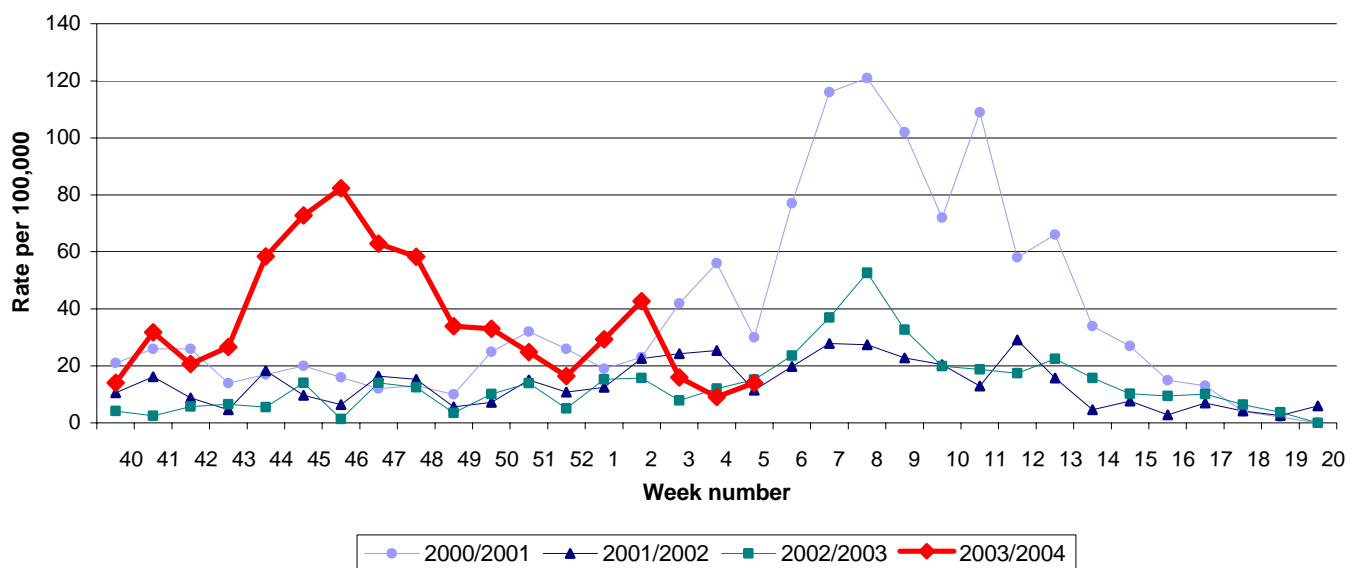


Figure 1: GP consultation rate for influenza-like illness per 100,000 population by report week, during the 2000/2001, 2001/2002, 2002/2003 & 2003/2004-influenza seasons.

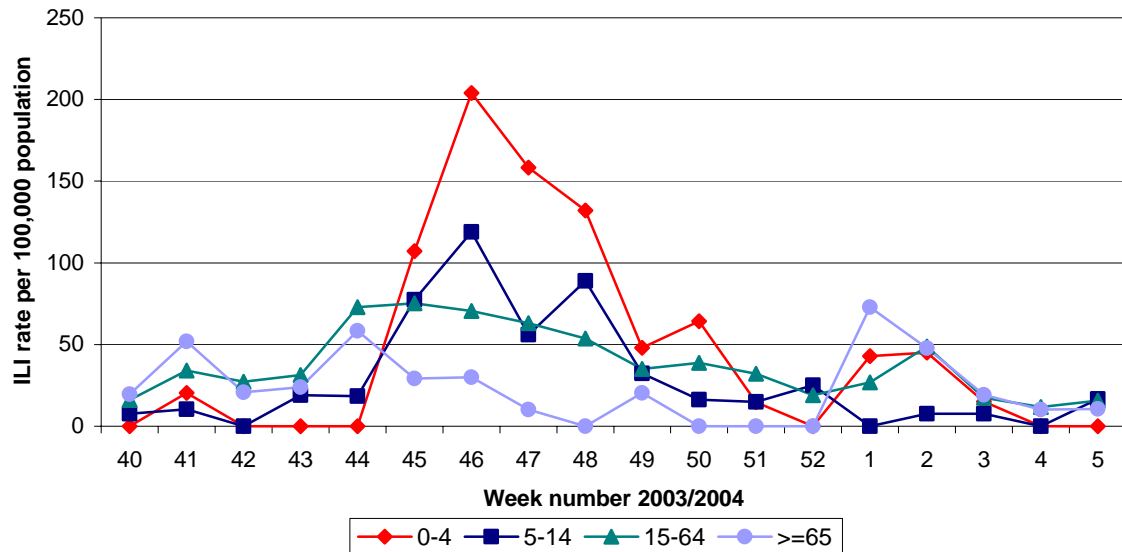


Figure 2: Age specific GP consultation rate for ILI per 100,000 population by week for the 2003/2004-influenza season. *The denominator used in the age specific consultation rate is from the 2002 census data; this assumes that the age distribution of the sentinel general practices is similar to the national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

Virological data from the National Virus Reference Laboratory

During week 5, the National Virus Reference Laboratory (NVRL) received 5 swabs from sentinel GPs (table 1), two of these were positive for influenza A. The total number of positive influenza swabs from sentinel GPs for the 2003/2004 season to date is 147: 17 influenza A (unsubtyped), 123 influenza A (H3N2) and 7 influenza B viruses.

The NVRL also tested 57 respiratory non-sentinel specimens mainly from hospitals and some GPs during week 5, no specimens were positive for influenza A or B, 3 were positive for parainfluenza virus type-3 (PIV-3) and 23 specimens were positive for respiratory syncytial (RSV) virus.

Between weeks 40 2003 and 5 2004, a total of 1270 respiratory non-sentinel specimens have been tested by the NVRL, 95 were positive for influenza A, 14 for influenza B, 273 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 256: 235 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, 5 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
Total	321	147	45.8	17	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
Total	1270	109	8.6	95	14	273

* 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
Total	1591	256	16.1	235	21	273

Table 4: Total number of sentinel and non-sentinel* influenza A and B positive specimens by health board for week 5 2004 and the 2003/2004 season to date

	Week 5 2004			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
ERHA	1	0	1	117	9	126
MHB	0	0	0	9	2	11
MWHB	1	0	1	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	0	0	0	10	0	10
WHB	0	0	0	9	3	12
Total	2	0	2	235	21	256

* 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.

Hospital admissions data

In the ERHA, total hospital admissions increased in a sentinel hospital in week 4 and respiratory admissions increased in a sentinel hospital in week 5. Respiratory admissions also increased in week 4 in a sentinel hospital in the SEHB.

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

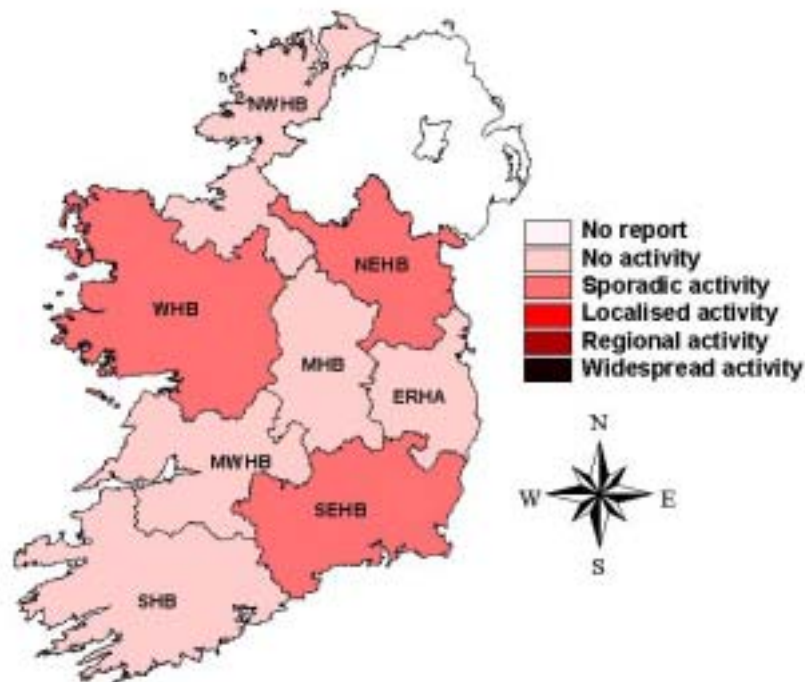


Figure 2: Map of influenza activity by health board/authority during week 4 2004.

Influenza activity in Northern Ireland

During week 5, sentinel general practices reported a combined influenza and ILI consultation rate of 28.8 per 100,000, a decrease from the updated rate of 40.5 per 100,000 in week 4. No influenza positive specimens were detected during week 5.
<http://www.cdscni.org.uk/>

Influenza activity in England, Scotland and Wales

Influenza activity has continued to decline in recent weeks and is now at a low level. Consultations for ILI in the UK are within the baseline range. Few influenza viruses are now being detected in community based virological schemes. During week 4, there were 4 isolations of influenza A (H3) from specimens referred to the ERNVL.
http://www.hpa.org.uk/infections/topics_az/influenza/fluactivity0304.htm

Influenza activity in Europe

During week 4, influenza activity continues to increase in the east of Europe and in Italy. Clinical incidence was highest among younger age groups (0-14) in all countries reporting increasing or high influenza activity, as seen earlier in the season in Western Europe. Widespread activity was reported in Italy and Switzerland. Regional activity was reported in Latvia. Local or sporadic activity was reported by 16 networks and no influenza activity by four networks. Of the 271 positive influenza specimens reported to the European Influenza Surveillance Scheme, 269 were influenza A (165 unsubtyped, 1 A H1 and 103 A H3) and two were influenza B. The predominant virus circulating in Europe remains influenza A/Fujian/411/2002 (H3N2)-like.
<http://www.eiss.org/>

Influenza activity in Canada

During week 4, influenza activity appears to have peaked in most parts of the country, with many regions now reporting localized activity, except for Quebec and south-western Ontario where activity remains widespread. Across Canada, during week 4, sentinel physicians reported 18 cases of ILI per 1,000 patient visits, which is below the expected range for this time of year. Health Canada received 3,160 reports of laboratory tests for influenza, including 591 (19%) influenza A detections and 1 influenza B detection. 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

In the US, all surveillance components reflected decreases in influenza activity during week 3 2004. The percentage of specimens testing positive for influenza decreased, and the percentage of patient visits for ILI remained below the national baseline. Mortality due to pneumonia and influenza appears to have peaked, but remained above the epidemic threshold. During week 3, WHO and NREVSS laboratories reported 1,136 specimens tested for influenza viruses, and 85 (7.5%) were positive.
<http://www.cdc.gov/ncidod/diseases/flu/fluvirus.htm>

Influenza activity Worldwide

No influenza activity was reported in Argentina and Madagascar during week 4. Sporadic activity was reported in Hong Kong (4 A unsubtyped & 9 A H3N2) and Chile (5 A unsubtyped & 1 B). Widespread activity was reported in the Russian

Federation with 2 A H3N2 virus detections. The Republic of Korea reported 3 A H3N2 virus detections during week 3 and Japan reported 85 A H3N2 virus detections.
<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. With the exception of a family cluster in Vietnam, all human cases have been linked to contact with infected poultry. In the current family cluster of cases in Vietnam, WHO considers that limited human-to human transmission, from a brother to his sisters, is one possible explanation. However, as H5N1 infection in poultry is widespread in Vietnam, direct transmission from poultry to humans cannot be entirely ruled out on the basis of available evidence. 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/>