

# Weekly Influenza Surveillance Report



**Week 7 2004**

**Week starting Monday 9<sup>th</sup> February 2004 &  
ending Sunday 15<sup>th</sup> February 2004**

**Report produced: 18/02/2004**

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

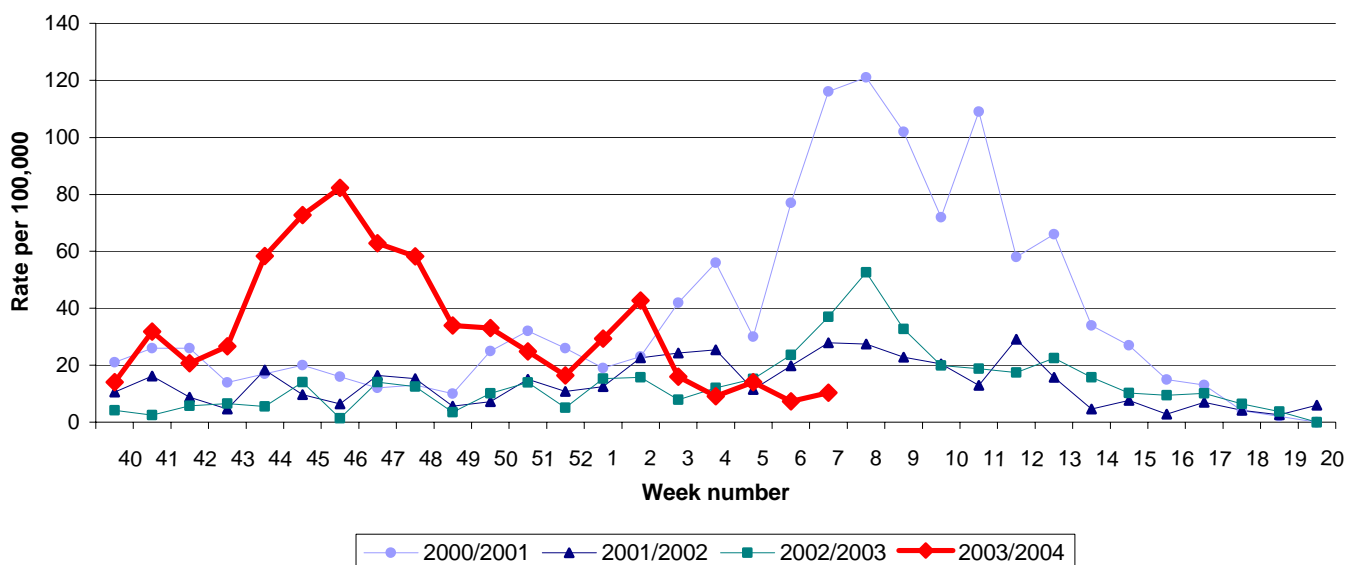
## Summary

GP consultation rates for influenza-like illness in Ireland increased slightly during week 7, however remain at very low levels for the time of year. Only one influenza A virus positive detection was reported in week 7. NDSC continues to closely monitor occurrences of avian influenza A (H5N1) in Asia.

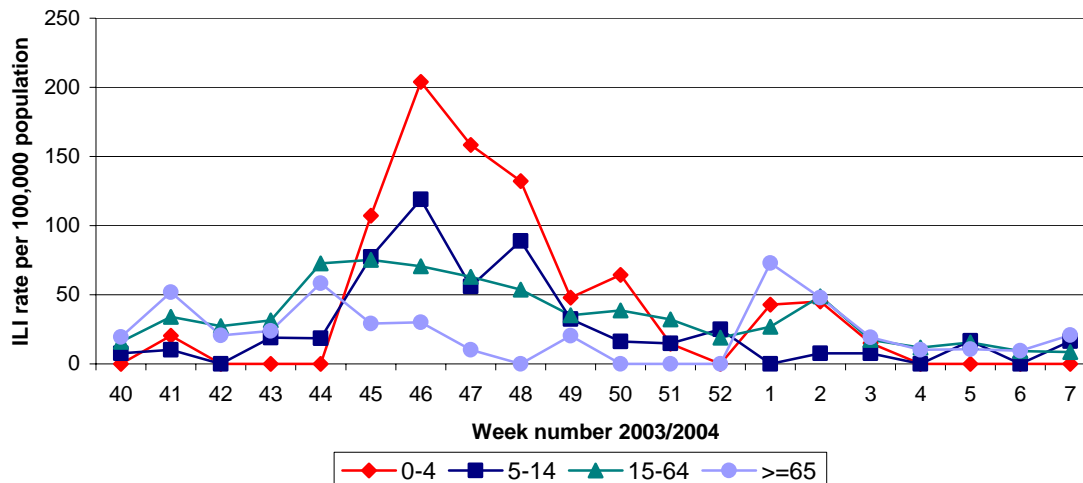
## Clinical data

During week 7 2004 (the week ending the 15<sup>th</sup> of February 2004), 9 influenza-like illness (ILI) cases were reported from sentinel general practices, corresponding to an ILI consultation rate of 10.4 per 100,000 population, a slight increase from the updated rate of 7.3 per 100,000 in week 6 (figure 1). Twenty-eight of the sentinel general practices reported during week 7, with only 6 reporting ILI.

During week 7, no ILI cases were reported in 0-4 year olds. ILI rates per 100,000 population decreased slightly in 15-64 year olds to 8.5 per 100,000. In 5-14 year olds and in those aged 65 years or older ILI rates increased to 16.5 and 20.8 per 100,000, respectively, during week 7 (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 7, 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 149: 7 influenza A (unsubtyped), 135 influenza A (H3N2) and 7 influenza B viruses.

The NVRL also tested 58 respiratory non-sentinel specimens mainly from hospitals and some GPs during week 7, no specimens were positive for influenza A or B and 14 specimens were positive for respiratory syncytial (RSV) virus. Between weeks 40 2003 and 7 2004, a total of 1375 respiratory non-sentinel specimens have been tested by the NVRL, 95 were positive for influenza A, 14 for influenza B, 304 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 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
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	3	3	1
52	5	2	20.0	1	1	0
1	5	2	40.0	0	2	0
2	14	3	21.4	0	3	0
3	5	1	20.0	1	0	0
4	3	0	0.0	0	0	0
5	5	2	40.0	0	2	0
6	4	1	40.0	0	1	0
7	3	1	33.3	1	0	0
<b>Total</b>	<b>329</b>	<b>149</b>	<b>45.3</b>	<b>7</b>	<b>135</b>	<b>7</b>

**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	79	2	2.5	2	0	34
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	44	0	0.0	0	0	15
7	58	0	0.0	0	0	14
<b>Total</b>	<b>1375</b>	<b>109</b>	<b>7.9</b>	<b>95</b>	<b>14</b>	<b>304</b>

\* 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	93	5	5.4	5	0	34
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	48	1	2.1	1	0	15
7	61	1	1.6	1	0	14
<b>Total</b>	<b>1704</b>	<b>258</b>	<b>15.1</b>	<b>237</b>	<b>21</b>	<b>304</b>

**Table 4:** Total number of sentinel and non-sentinel\* influenza A and B positive specimens by health board for week 7 2004 and the 2003/2004 season to date

	Week 7 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	1	0	1	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
<b>Total</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>237</b>	<b>21</b>	<b>258</b>

\* 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

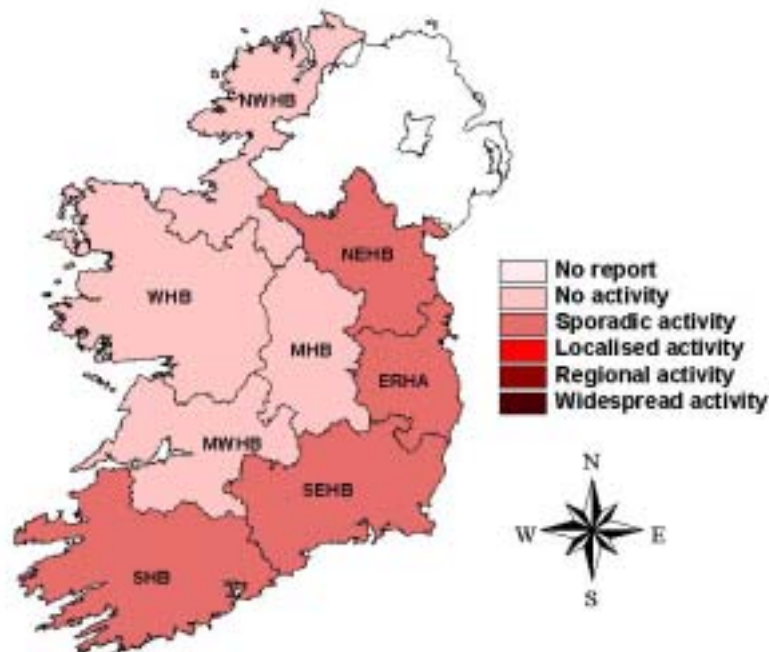
There were no reports to NDSC of increased respiratory admissions during weeks 6 or 7 2004.

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



**Figure 2:** Map of influenza activity by health board/authority during week 6 2004.

### **Influenza activity in Northern Ireland**

During week 7, sentinel general practices reported a combined influenza and ILI consultation rate of 26.0 per 100,000, a decrease from the rate of 32.6 per 100,000 in week 6. There were no laboratory confirmations of influenza during week 7. One RSV positive specimen was detected in a hospitalised child.

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

### **Influenza activity in England, Scotland and Wales**

GP consultation rates for ILI decreased in England to 6.3 per 100,000 in week 7, with the highest rates reported in 0-4 year olds. In Wales, ILI rates remained little changed at 0.9 per 100,000 in week 7. In Scotland, the GP ILI consultation rate decreased from 24.0 per 100,000 in week 6 to 14.0 per 100,000 in week 7. Only one influenza A (H3) virus was detected during week 7 from specimens referred to the ERNVL.

[http://www.hpa.org.uk/infections/topics\\_az/influenza/fluactivity0304.htm](http://www.hpa.org.uk/infections/topics_az/influenza/fluactivity0304.htm)

### **Influenza activity in Europe**

During week 6, increased levels of influenza activity were currently being reported in Central Europe, the Baltic States, Italy and Germany. In the Czech Republic, Italy, Germany and Poland the activity continued to increase in week 6 and in Latvia, Lithuania, the Slovak Republic and Slovenia there are indications that it is declining. Clinical incidence in these countries is highest among younger age groups (0-14), as seen earlier this season in Western Europe. Among networks that have experienced early seasonal influenza activity, the incidence has returned to baseline levels. Influenza activity due to the A/Fujian-like virus has moved across Europe this season from west to east (it is now affecting Central Europe, the Baltic States, Italy and Germany). The predominant virus circulating in Europe remains influenza A/Fujian/411/2002 (H3N2)-like. <http://www.eiss.org/>

### **Influenza activity in Canada**

During week 6, influenza activity remained widespread in Quebec with the rest of the Canada reporting either sporadic or no influenza activity. Across Canada, during week 6, sentinel physicians reported 40 cases of ILI per 1000 patient visits, which is within the expected range for this time of year. Health Canada reported 483 (14.7%) influenza A detections and 4 influenza B detections during week 6. 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 the week ending 7<sup>th</sup> February 2004 (week 5) in the US. The percentage of patient visits for ILI continued to decline, and remained below the national baseline for the fourth consecutive week. Mortality due to pneumonia and influenza has peaked, but remained above the epidemic threshold during week 5. There were no reports of widespread influenza activity from state and territorial epidemiologists during week 5. Reports of influenza-associated deaths in children continue to be collected from state health departments. Forty-eight (3.6%) of 1,322 specimens tested by WHO and NREVSS collaborating laboratories were positive for influenza during week 5.

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

### **Influenza activity Worldwide**

During week 6, sporadic influenza activity was reported in Argentina (2 A untyped & 1 B), Hong Kong (1 A untyped, 16 A H3N2 & 3 B), Malaysia (1 A untyped), Iceland (3 A H3N2) and Chile (1 A untyped). Localised influenza activity was reported in Finland (6 A untyped) and Madagascar (6 A H3N2). The Russian Federation reported regional outbreaks during week 6, with a decrease in influenza morbidity in most regions of Russia. In the Republic of Korea, 6 influenza B viruses were detected. In Israel and Japan, influenza A predominated, with 2 A untyped and 35 A (H3N2) virus detections reported, respectively.

<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. To date a limited number of human cases and deaths due to influenza A (H5N1) have been reported in Thailand and Vietnam. Avian influenza viruses do not normally infect species other than birds and pigs. The first documented infection of humans with an avian influenza virus occurred in Hong Kong in 1997, when the H5N1 strain caused severe respiratory disease in 18 humans, of whom 6 died. The infection of humans coincided with an epidemic of highly pathogenic avian influenza, caused by the same strain, in Hong Kong's poultry population. Extensive investigation of that outbreak determined that close contact with live infected poultry was the source of human infection. There is currently no evidence of efficient human-to-human transmission of influenza A (H5N1). The World Health Organization (WHO) is monitoring the current avian influenza outbreaks closely, and has asked the countries of the world to be vigilant for cases of influenza A (H5).

For further information on avian influenza: <http://www.ndsc.ie/DiseaseTopicsA-Z/AvianInfluenza/>

For the latest WHO update on these outbreaks:

[http://www.who.int/csr/disease/avian\\_influenza/en/](http://www.who.int/csr/disease/avian_influenza/en/)

### **Northern Hemisphere influenza vaccine for the 2003/2004**

On February the 28<sup>th</sup> 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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