

# Weekly Influenza Surveillance Report



**Week 9 2004**

**Week starting Monday 23<sup>rd</sup> February 2004 &  
ending Sunday 29<sup>th</sup> February 2004**

**Report produced: 04/03/2004**

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

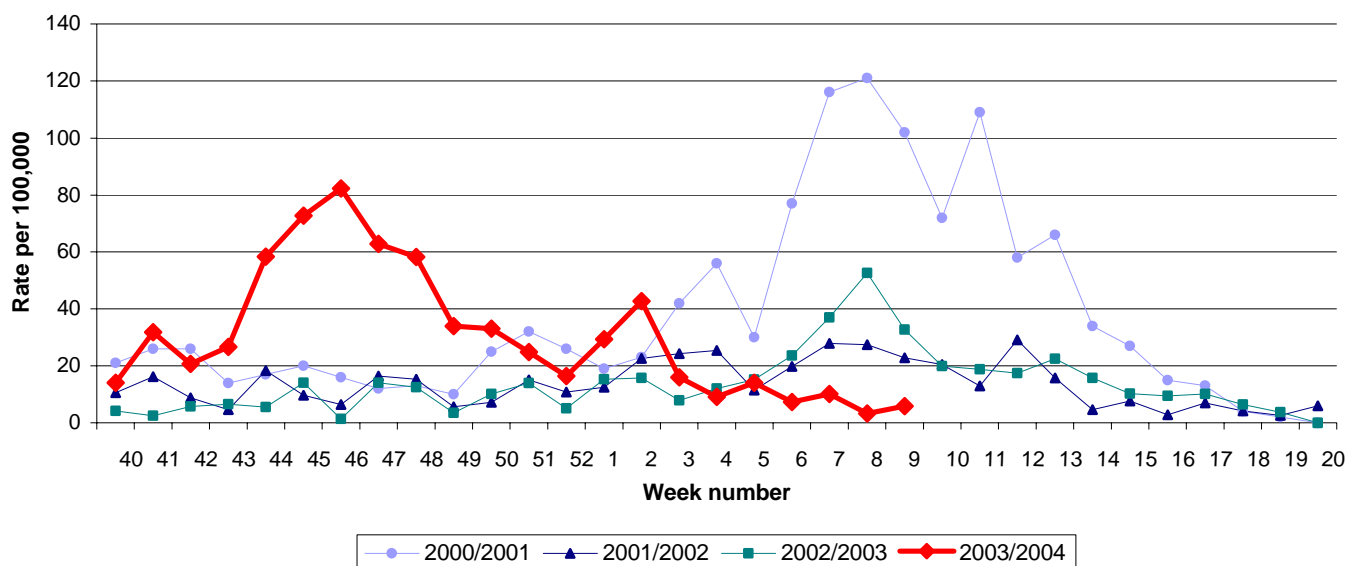
## Summary

GP consultation rates for influenza-like illness in Ireland remained at low levels during week 9, with no influenza positive specimens detected by the NVRL from any source. The WHO has published its recommendations on the composition of influenza vaccines for use in the 2004-2005 Northern Hemisphere influenza season.

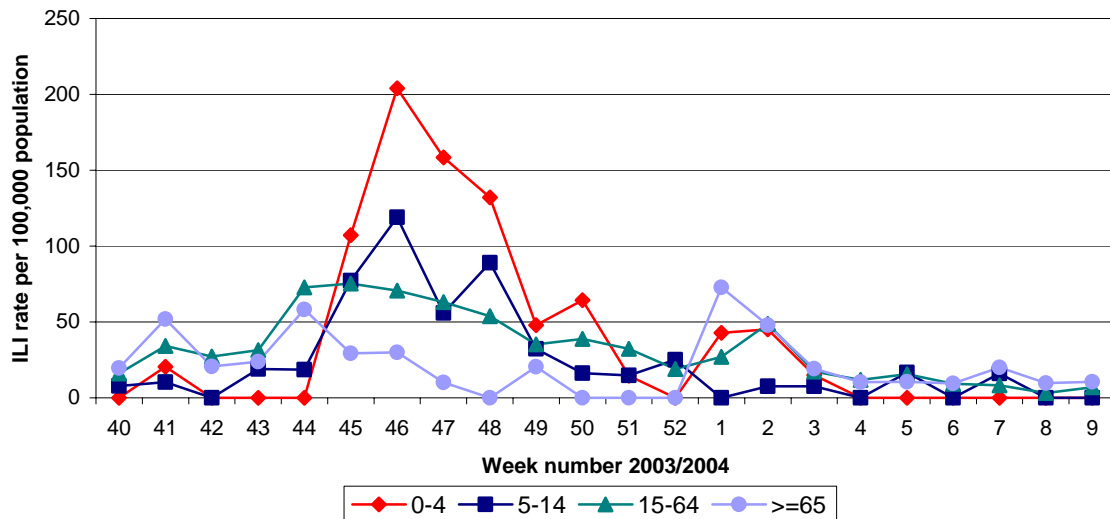
## Clinical data

During week 9 2004 (the week ending the 29<sup>th</sup> of February 2004), five influenza-like illness (ILI) case were reported from sentinel general practices, corresponding to an ILI consultation rate of 5.9 per 100,000 population, an increase from the updated rate of 3.3 per 100,000 in week 8 (figure 1). Twenty-nine of the sentinel general practices reported during week 9, with five reporting ILI. This is the lowest rate reported for week 9 for any season since surveillance began in 2000.

During week 9, no ILI cases were reported in 0-4 & 5-14 year olds. ILI rates per 100,000 increased slightly during week 9 in the 15-64 year age group and in those aged 65 years or older. Four ILI cases were reported in the 15-64 year age group, corresponding to a rate of 7.0 per 100,000 and one ILI case was reported in those aged 65 years or older, corresponding to a rate of 10.6 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 9, the National Virus Reference Laboratory (NVRL) received 5 swabs from sentinel GPs (table 1), all of which were 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 52 respiratory non-sentinel specimens mainly from hospitals and some GPs during week 9, no specimens were positive for influenza A or B, 12 specimens were positive for respiratory syncytial (RSV) virus and one was positive for parainfluenza virus type 3 (PIV-3). Between weeks 40 2003 and 9 2004, a total of 1483 respiratory non-sentinel specimens have been tested by the NVRL, 95 were positive for influenza A, 14 for influenza B, 321 RSV, 2 adenovirus, 5 PIV-1, 4 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
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
8	6	0	0.0	0	0	0
9	5	0	0.0	0	0	0
<b>Total</b>	<b>342</b>	<b>149</b>	<b>43.6</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
8	56	0	0.0	0	0	17
9	52	0	0.0	0	0	12
<b>Total</b>	<b>1483</b>	<b>109</b>	<b>7.3</b>	<b>95</b>	<b>14</b>	<b>333</b>

**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
8	62	0	0.0	0	0	17
9	57	0	0.0	0	0	12
<b>Total</b>	<b>1823</b>	<b>258</b>	<b>14.2</b>	<b>237</b>	<b>21</b>	<b>333</b>

**Table 4:** Total number of sentinel and non-sentinel\* influenza A and B positive specimens by health board for week 9 2004 and the 2003/2004 season to date

	Week 9 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
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</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**

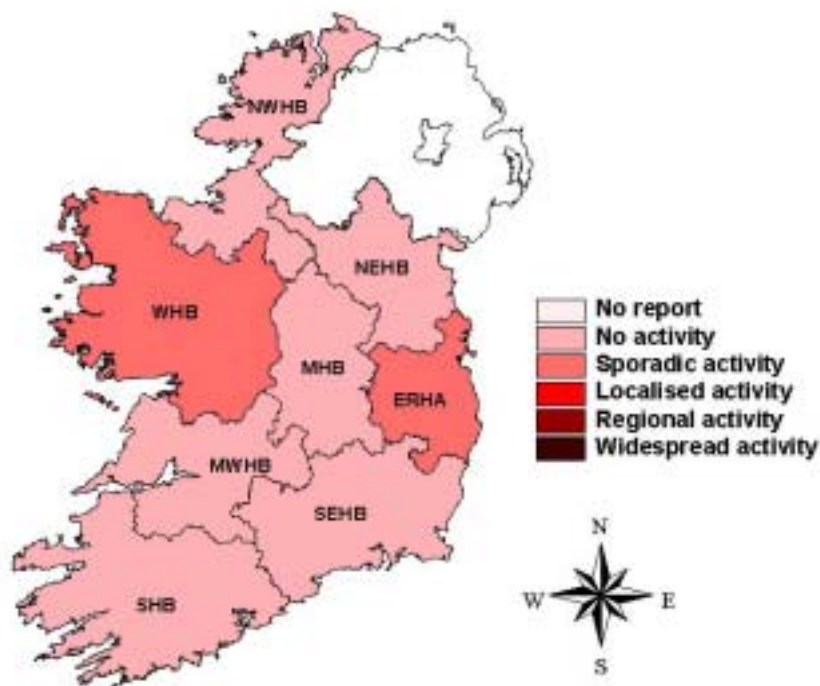
During week 9, respiratory admissions increased slightly compared to previous weeks, in 2 sentinel hospitals, one in the ERHA and one in the WHB.

### **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 8, the ERHA & WHB 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 8 2004.

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

During week 9, sentinel general practices reported a combined influenza and ILI consultation rate of 39.3 per 100,000, an increase from the updated rate of 13.5 per 100,000 in week 8. There were no laboratory confirmations of influenza during week 9. <http://www.cdscni.org.uk/>

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

GP consultation rates for ILI remained little changed in England at 8.3 per 100,000 in week 9, with the highest rates reported in 0-4 year olds. In Wales, 0.0 ILI cases per 100,000 were reported in weeks 8 & 9. In Scotland, the GP ILI consultation rate increased slightly from 13.0 per 100,000 in week 8 to 15.0 per 100,000 in week 9. Two influenza A (H3) virus positive specimens were detected by the ERNVL during week 9. [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 8, the influenza season seems to have come to an end in several countries in Europe. Clinical activity (reports of ILI) has returned to winter baseline levels in 16 networks, though a few networks continue to report sporadic activity. The predominant virus circulating in Europe remains influenza A/Fujian/411/2002 (H3N2)-like. <http://www.eiss.org/>

### **Influenza activity in Canada**

During week 8, influenza activity was decreasing in Canada, with most provinces reporting either sporadic or no influenza activity. Across Canada, during week 8, sentinel physicians reported 22 cases of ILI per 1000 patient visits, which is below the expected range for this time of year. Health Canada received 2,699 reports of laboratory tests for influenza, including 273 (10.1%) influenza A detections and 1 influenza B detection. The National Microbiology Laboratory has antigenically characterised 702 influenza viruses to date, 693 (99%) were influenza A viruses, including 666 (96%) A/Fujian/411/02 (H3N2)-like, 25 (4.0%) A/Panama/2007/99 (H3N2)-like, 1 A/NewCaledonia/20/99 (H1N1)-like and 1 H1N2. Nine (9/702) were influenza B viruses, including 2 B/Hong Kong/330/2001-like and 7 B/Sichuan/379/99-like. <http://www.hc-sc.gc.ca/pphb-dgsp/fluwatch/index.html>

### **Influenza activity in the United States**

Influenza activity remained low in the US during week 7. The percentage of patient visits for ILI remained below the national baseline. Mortality due to pneumonia and influenza declined below the epidemic threshold for the first time in 10 weeks. Twenty-three (2.2%) of 1,040 specimens collected by the WHO and NREVSS collaborating laboratories were positive for influenza. There were no reports of widespread influenza activity from state and territorial epidemiologists during week 7. One state reported regional activity and 9 states reported localised activity. Thirty-one states, New York City, Guam and Puerto Rico reported sporadic activity and 9 states and the District of Columbia reported no influenza activity. <http://www.cdc.gov/ncidod/diseases/flu/fluvirus.htm>

### **Influenza activity Worldwide**

During week 8, sporadic activity was reported in Chile and China. In Chile, activity was associated with influenza A. In China, 146 influenza A (H3), 12 influenza A (unsubtyped) and 4 influenza B viruses were detected during week 8.

<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/](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<sup>a</sup>
- a B/Shanghai/361/2002-like virus<sup>b</sup>

<sup>a</sup> The currently used vaccine virus is A/Wyoming/3/2003. A/Kumamoto/102/2002 is also available as a vaccine virus.

<sup>b</sup> 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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