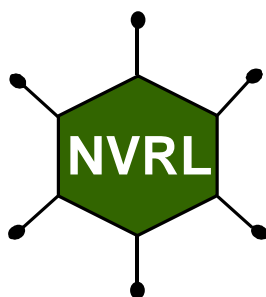


Weekly Influenza Surveillance Report



Week 47 2003

Report produced: 27/11/2003

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

Summary

GP consultation rates for influenza-like illness decreased during week 47 in Ireland. Influenza activity levels remain higher than previously recorded for this time of year and also higher than recorded for the previous 2 seasons, however activity levels are still within the range of normal seasonal activity. It is important to note that this increased influenza activity is compared to the last 3 seasons when unusually mild influenza activity was reported. Influenza A continues to circulate throughout the country. Although, the early influenza activity in Ireland appears to have peaked, it is too early to predict whether the peak in activity for the season has been reached or if there will be a resurgence of activity later in the season.

Clinical data

During week 47 2003 (the week ending the 23rd of November 2003), 56 influenza-like illness (ILI) cases were reported from sentinel general practices, corresponding to an ILI consultation rate of 62.9 per 100,000 population, decreasing from the updated rate of 82.3 per 100,000 in week 46 (figure 1). Twenty-eight of the sentinel general practices reported during week 47, with 16 reporting ILI.

During week 47, ILI rates per 100,000 population were highest in the 0-4 year age group (figure 2); all age groups decreased during week 47 compared to week 46. 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.

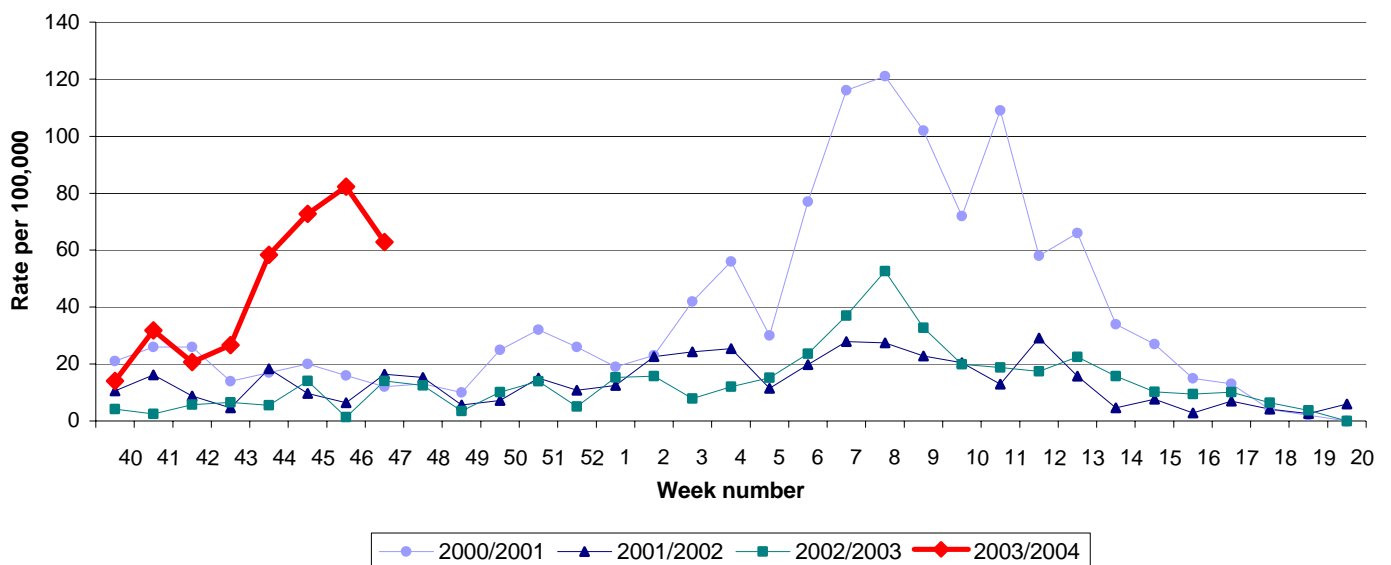


Figure 1: GP consultation rate for influenza-like illness per 100,000 population by report week, during the 2000/2001, 2001/2002, 2002/2003 & 2003/2004-influenza seasons.

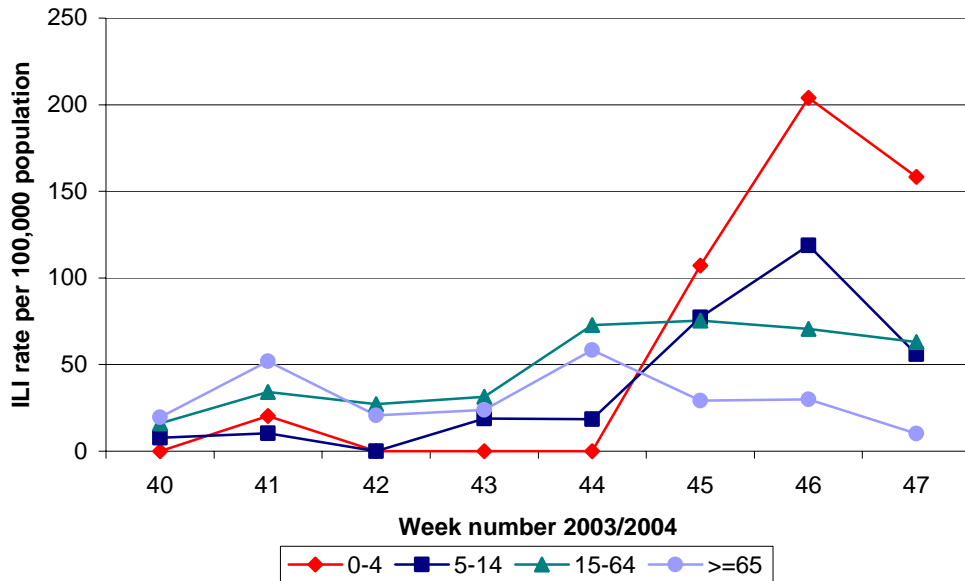


Figure 2: Age specific GP consultation rate for ILI per 100,000 population by week for the 2003/2004-influenza season. *The denominator used in the age specific consultation rate is from the 2002 census data; this assumes that the age distribution of the sentinel general practices is similar to the national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

Virological data from the National Virus Reference Laboratory

During week 47, the National Virus Reference Laboratory (NVRL) received 34 swabs from sentinel GPs (table 1). Eighteen swabs were positive for influenza; all were influenza A (unsubtyped). The total number of positive influenza specimens from sentinel GPs for the 2003/2004 season to date is 101: 83 influenza A (unsubtyped), 15 influenza A (H3N2) and 3 influenza B viruses.

The NVRL also tested 71 respiratory non-sentinel specimens mainly from hospitals and some GPs during week 47, 16 (22.5%) were positive for influenza A, 5 (7.0%) for respiratory syncytial (RSV) virus and 1 (1.4%) for parainfluenza virus type 2. Between weeks 40 and 47 2003, a total of 366 respiratory non-sentinel specimens have been tested by the NVRL, 48 (13.1%) were positive for influenza A, 12 (3.3%) were positive for RSV, 3 (0.8%) for parainfluenza virus type 1, 1 (0.3%) for parainfluenza type 2 and 2 (0.5%) for parainfluenza virus type 3. Of the 48 influenza A positive non-sentinel specimens detected this season, 34 cases were in the 0 to 4 year age group, 2 were 5-14, 11 were 15-64 and one case was aged 65 years or older.

The total number of influenza positive specimens from all sources (sentinel and non-sentinel) this season is 149; 146 influenza A and 3 influenza B (table 2). The majority of influenza positive cases this season have been in children and young adults, with 39 cases in the 0 to 4 year age group, 17 aged 5-14 and 28 cases in the 15-24 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. Sixty influenza positive specimens this season were in cases aged between 25 and 64 years of age and 3 cases were 65 years or older.

Table 1: Total number of sentinel swabs tested for influenza by week and positive results by type, subtype and report week for the 2003/2004-influenza season

Week number	Total swabs	Positive swabs	Percentage positive	Influenza A (unsubtyped)	Influenza A (H1)	Influenza A (H3N2)	Influenza B
40	9	0	0.0	0	0	0	0
41	12	4	33.3	0	0	4	0
42	14	7	50.0	2	0	5	0
43	10	4	40.0	4	0	0	0
44	37	25	67.6	18	0	6	1
45	48	27	56.3	25	0	0	2
46	38	16	42.1	16	0	0	0
47	34	18	52.9	18	0	0	0
Total	202	101	50.0	83	0	15	3

Table 2: 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	31	36.5	30	1	0
45	151	39	25.8	37	2	2
46	110	26	23.6	26	0	4
47	105	34	32.4	34	0	5
Total	568	149	26.2	146	3	12

Table 3: Total number of sentinel and non-sentinel* influenza A and B positive specimens by health board for week 47 and the 2003/2004 season to date

	Week 47 2003			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
ERHA	18	0	18	75	0	75
MHB	2	0	2	6	0	6
MWHB	1	0	1	12	1	13
NEHB	9	0	9	22	0	22
NWHB	2	0	2	6	0	6
SEHB	1	0	1	12	1	13
SHB	1	0	1	6	0	6
WHB	0	0	0	7	1	8
Total	34	0	34	146	3	149

* 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 some countries in Western Europe, America and in 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

No school outbreaks were reported to NDSC during week 47. 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 of increased hospital admissions in sentinel hospitals during weeks 46 and 47.

Mortality data

There have been no further reports of influenza-associated deaths in Ireland. During week 47, NDSC received a report of a death associated with influenza A in an 18-month-old child in the SEHB. The child was admitted to Our Lady's Hospital for Sick Children, Crumlin in early November and died during week 47. This is the only report of a death associated with influenza in Ireland this season.

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 46, all health boards reported sporadic influenza activity (figure 2).

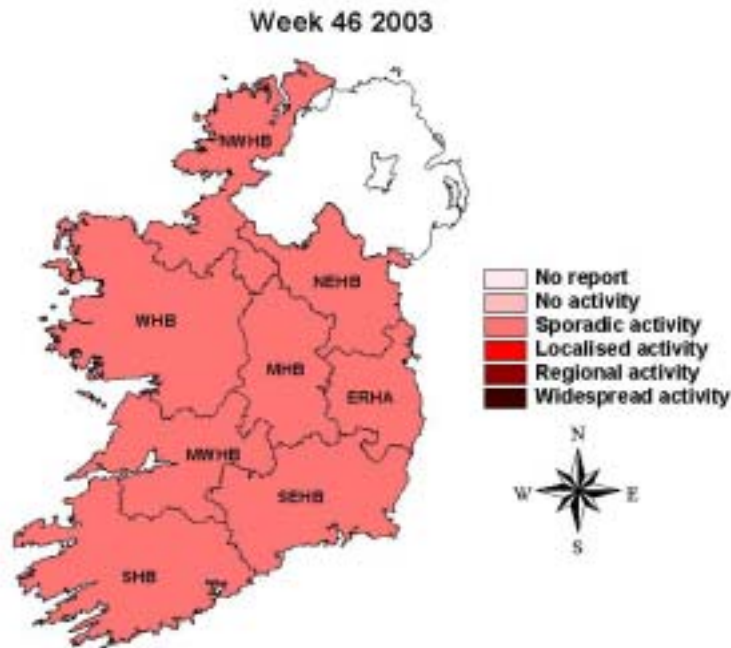


Figure 2: Map of influenza activity by health board during week 46 2003.

Influenza activity in Northern Ireland

In Northern Ireland during week 47, 20/23 sentinel GPs returned a combined influenza and ILI consultation rate of 126 per 100,000, a decrease from the rate of 138.5 per 100,000 in week 46. No influenza positive specimens were reported in week 47. <http://www.cdscni.org.uk//>

Influenza activity in England, Scotland and Wales

In England, GP consultation rates for ILI decreased from 62.2 per 100,000 in week 46 to 54.5 per 100,000 in week 47, with rates highest in the 0-4 year age group and in those over 65 years of age. In Scotland, the GP ILI consultation rates also decreased to 116 per 100,000 during week 47. In Wales, the GP consultation rates increased to 9.7 per 100,000 in week 47. Sixty influenza A (H3) viruses were confirmed by the ERNVL during week 47. To date this season, 17 Fujian-like & 3 Panama-like A H3N2) strains have been characterized.

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

Influenza activity in Europe

Ireland, Scotland, Spain, England and Portugal reported widespread influenza activity to the European Influenza Surveillance Scheme during week 46. France, Northern Ireland and Norway reported localised activity and Belgium, Czech Republic and Switzerland reported sporadic activity. Based on the networks reporting age specific data, incidence rates were highest among the 0-4 and 5-14 year age groups, in particular the 0-4 age group. Of the 444 influenza viruses isolated in Europe in week 46, 443 were influenza A (320 untyped, 2 H1N2 and 121 H3N2) and 1 was

influenza B. Influenza A (H3N2) was predominant in the Czech Republic, Northern Ireland, Norway, Portugal, Spain, and Switzerland. Influenza A (unsubtyped) was the predominant type in Belgium, Ireland and Scotland. The A/Fujian/411/2002 (H3N2)-like strain is the predominant influenza strain currently circulating in the western part of Europe. <http://www.eiss.org/>

Influenza activity in Canada

Widespread influenza activity was reported in all regions in Alberta and Saskatchewan during week 46. Localised activity was reported in 4 regions and sporadic activity in 8 regions in Canada. During week 46, sentinel physicians reported 34 cases of ILI per 1000 patient visits, which is within baseline rates. Health Canada received 1811 reports of laboratory tests for influenza in week 46, including 388 (21.4%) influenza A detections. The National Microbiology Laboratory has antigenically characterized 69 influenza viruses to date: 43 A/Fujian/411/02(H3N2)-like, 25 A/Panama/2007/99(H3N2)-like and 1 A/New Caledonia/20/99(H1N1)-like. During week 46, influenza outbreaks were reported in 8 schools and 10 long-term care facilities. <http://www.hc-sc.gc.ca/pphb-dgspsp/fluwatch/index.html>

Influenza activity in the United States

The proportion of patient visits to sentinel physician was above national baseline levels in week 46. Two state health departments reported widespread influenza activity, 6 reported regional activity, 11 reported localised activity, 20 states, New York City, Guam, and Puerto Rico reported sporadic activity, and 10 states and the District of Columbia reported no influenza activity. The WHO and NREVSS laboratories reported 671 specimens positive for influenza virus during week 46. Of the 77 influenza A (H3N2) viruses characterised this season, 17 were A/Panama-like and 60 were A/Fujian-like. <http://www.cdc.gov/ncidod/diseases/flu/fluvirus.htm>

Influenza activity Worldwide

No influenza activity was reported in Argentina in week 46. Sporadic activity was reported in French Guiana, Hong Kong and Chile. Six influenza A (H1N2) and 4 A (unsubtyped) viruses were detected in Hong Kong. In Israel, 13 A (H3N2) and 46 influenza A (unsubtyped) viruses were detected.

<http://rhone.b3e.jussieu.fr/flunet/www/>

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/>