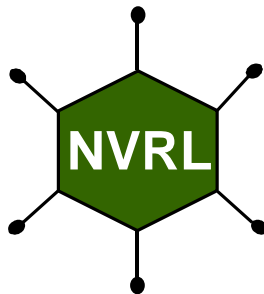


Weekly Influenza Surveillance Report



Week 44 2003

Report produced: 06/11/2003

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

Summary

GP consultations rates for influenza-like illness increased during week 44 in Ireland. Influenza activity levels are higher than previously recorded for this time of year and also higher than recorded for the previous 2 seasons. Influenza A has been detected in all health boards to date this season. It is important to note that this increased influenza activity is compared to the last 3 seasons when unusually mild influenza activity was reported.

Clinical data

During week 44 2003 (the week ending the 2nd of November 2003), 45 influenza-like illness (ILI) cases were reported from sentinel general practices, corresponding to an ILI consultation rate of 67.9 per 100,000 population, increasing from 29.5 per 100,000 in week 43. Twenty-seven of the sentinel general practices reported during week 44, with 16 reporting ILI. Between week 40 and 44 2003, 1 ILI case was aged between 0 and 4 years of age, 6 cases were 5-14 years, 35 cases were 15-24, 61 were 25-64 and 15 cases were aged 65 years or older. ILI rates per 100,000 have reached the highest recorded levels for week 44, since the influenza sentinel surveillance scheme began in October 2000. The ILI rates for week 44 2003 were also higher than any rates recorded in the previous 2 influenza seasons. It is important to note that influenza activity levels have been at low levels for the last 3 influenza seasons.

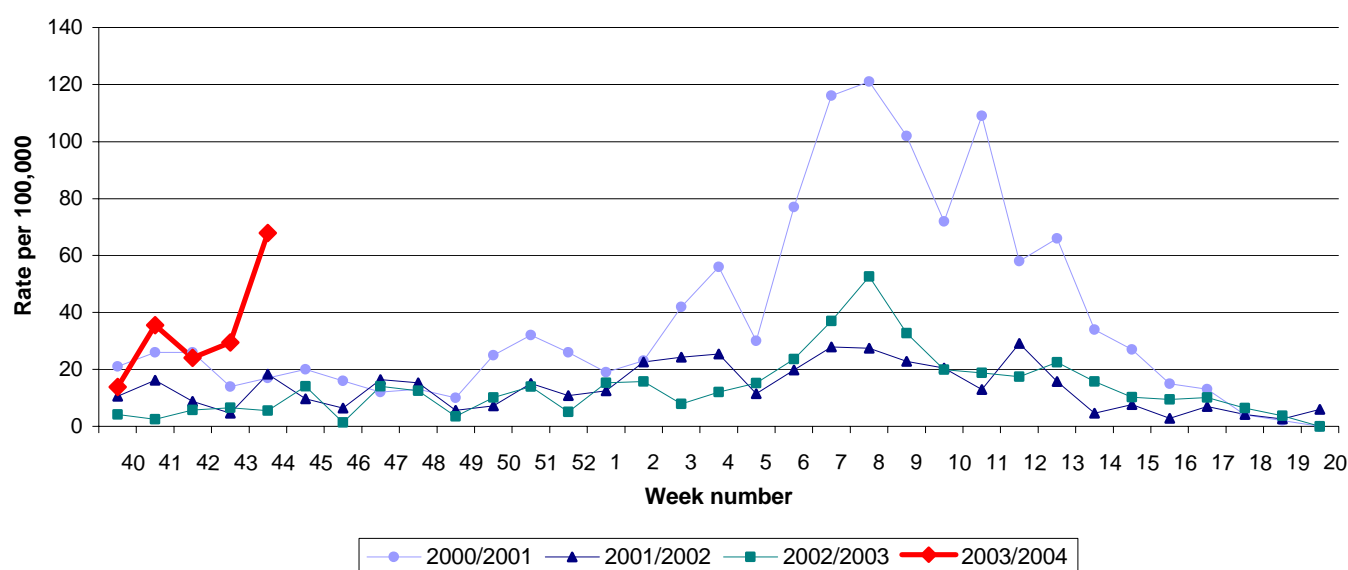


Figure 1: GP consultation rate for influenza-like illness per 100,000 population by report week, during the 2000/2001, 2001/2002, 2002/2003 & 2003/2004-influenza seasons.

Virological data from the National Virus Reference Laboratory

During week 44, the National Virus Reference Laboratory (NVRL) received 35 swabs from sentinel GPs (table 1). Twenty-two swabs were positive for influenza, with 6 influenza A (H3N2) and 16 influenza A (unsubtyped). The total number of positive influenza specimens from sentinel GPs for the 2003/2004 season is 37. No influenza B viruses have been detected this season.

The NVRL also tested 48 respiratory non-sentinel specimens mainly from hospitals and some GPs during week 44, 6 were positive for influenza A. Between week 40 and week 44 2003, a total of 120 respiratory non-sentinel specimens have been tested by the NVRL, 10 were positive for influenza A, 1 was positive for RSV, 2 for parainfluenza virus type 1 and 1 for parainfluenza virus type 3.

The total number of influenza positive specimens from all sources (sentinel and non-sentinel) this season is 47; all of these were influenza A (table 2). The first detections of influenza virus last season were during week 2 2003. The majority of influenza positive cases this season have been in children and young adults, with 5 cases between 0 and 4 years of age, 6 were 5-14, 12 were 15-24, 10 were 25-34, 13 were 35-64 and 1 case was 65 years or older. Detection of influenza in these 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.

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	35	22	62.9	16	0	6	0
Total	80	37	46.3	22	0	15	0

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	83	28	33.7	28	0	0
Total	200	47	23.5	47	0	1

** 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* influenza A and B positive specimens by health board for week 44 and the 2003/2004 season to date

	Week 44 2003			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
ERHA	11	0	11	22	0	22
MHB	0	0	0	1	0	1
MWHB	4	0	4	6	0	6
NEHB	1	0	1	2	0	2
NWHB	1	0	1	2	0	2
SEHB	6	0	6	8	0	8
SHB	2	0	2	3	0	3
WHB	3	0	3	3	0	3
Total	28	0	28	47	0	47

* 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 (H3N2)/Fujian/411/2002. Six of the 8 strains identified were from two previously reported school outbreaks of influenza in the ERHA in September. Two of the strains were identified from swabs taken by a sentinel GP. The A(H3N2)/Fujian/411/2002-like strain, which is also circulating in the UK, is slightly different to the influenza A(H3N2)/Panama-like strain, which has circulated in Ireland and other European countries over the past few years. The current influenza vaccine contains the Panama-like strain and is considered to offer some protection against the Fujian-like strain.

School outbreak reports

No school outbreaks of influenza were reported to NDSC during week 44. A total of 3 school outbreaks associated with influenza-like illness have been reported since the start of the 2003/2004-influenza season. A significant increase in absenteeism was reported from a secondary school in the SEHB during week 43.

Hospital admissions data

Hospital admissions for respiratory tract infections in a sentinel hospital in the ERHA have remained at increased levels for week 43 and week 44 2003.

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 43, 6 health boards/authority (NEHB, MHB, ERHA, SEHB, MWHB & SHB) reported sporadic influenza activity and 2 health boards (WHB & NWHB) reported no influenza activity (figure 2).

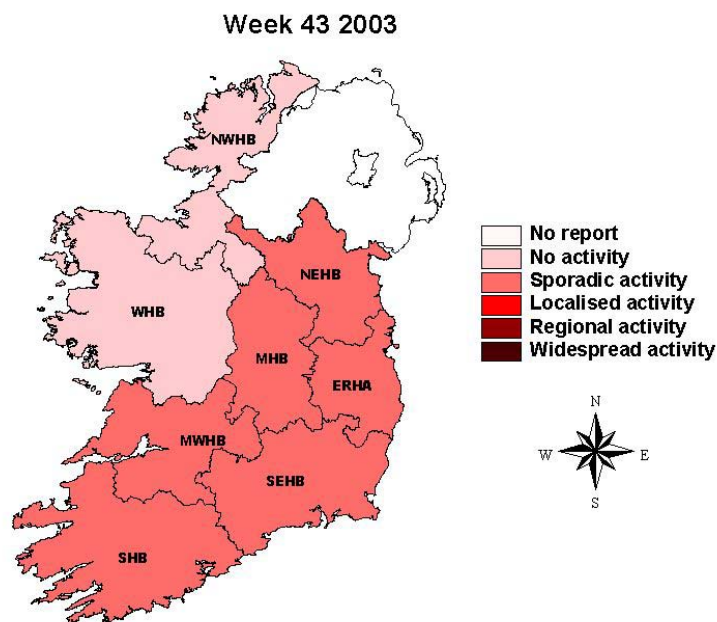


Figure 2: Map of influenza activity by health board during week 43 2003.

Influenza activity in Northern Ireland

In Northern Ireland during week 44, 22 of 23 sentinel general practices reported a GP consultation rate for combined influenza and ILI of 95.4 per 100,000 population, an increase from 74.4 per 100,000 in week 43. These are the highest rates recorded for any week since December 2000. Eight GP sentinel and hospital specimens were positive for influenza A (H3) during week 43. A total of 20 influenza A (H3) positive specimens have been detected in Northern Ireland this season, the majority of those affected have been babies, young children and young adults.

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

Influenza activity in England, Scotland and Wales

In England, GP consultation rates for ILI increased to 36.7 per 100,000 in week 44. In Scotland, GP consultation rates for ILI increased from 29.0 in week 43 to 56.0 per 100,000 in week 44. In Wales, the GP consultation rates for ILI decreased further to 7.0 per 100,000. Thirteen influenza A (H3) viruses were detected by the ERNVL during week 44. Health authorities in the UK have reported 5 deaths related to influenza A in children in the past two months. It is not known if this represents a genuine increase in deaths from influenza, as it may be related to new technologies that are used to detect the influenza virus.

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

Influenza activity in Europe

Sporadic influenza activity was reported in Spain, Portugal and France during week 43. No influenza activity was reported in 11 networks reporting to the European Influenza Surveillance Scheme (EISS). The total number of respiratory specimens collected by sentinel physicians in Europe during week 43 2003 was 287; 37 were

positive for influenza virus [(26 A (H3N2) and 11 A (unsubtyped)]. Influenza A (H3N2) was the predominant virus circulating in France, Portugal and Spain.
<http://www.eiss.org>

Influenza activity in Canada

During week 43 in Canada, localised influenza activity was reported in parts of Alberta, Saskatchewan and British Columbia. Sentinel physicians reported 33 cases of ILI per 1000 patient visits in week 43, which is above baseline rates. During week 43, Health Canada received 1416 reports of laboratory tests for influenza, 165 (11.65%) were positive for influenza A. The National Microbiology Laboratory has antigenically characterized 14 influenza viruses to date; all were found to be A/Panama/2007/99-like. During week 43, influenza outbreaks were reported in 3 schools and 2 long-term care facilities. <http://www.hc-sc.gc.ca/pphb-dgsp/fluwatch/index.html>

Influenza activity in the United States

During week 43, one state health department reported widespread influenza activity, 2 states reported localised activity, 14 reported sporadic activity and 29 reported no influenza activity. The proportion of patient visits to sentinel providers for ILI was less than the national baseline. WHO and NREVSS laboratories reported 707 specimens tested for influenza viruses; 32 were positive for influenza A (H3N2), 15 for influenza A (unsubtyped) and 1 for influenza B.
<http://www.cdc.gov/ncidod/diseases/flu/fluvirus.htm>

Influenza activity Worldwide

No influenza activity was reported in Madagascar in week 43. Sporadic activity was reported in Argentina, (3A unsubtyped), French Guiana, the Russian Federation, Australia (3A unsubtyped & 1B) and Chile (3A unsubtyped). In Hong Kong, mild influenza activity was reported during week 43, with 27 influenza A (H3N2), 5 A (unsubtyped) and 1 influenza B virus detections. Widespread influenza activity was reported in Iceland. <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.who.int/csr/disease/influenza/vaccinerecommendations1/en/>
<http://www.emea.eu.int>

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