

Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 16 (16 – 22 April 2012)

Summary

- Influenza activity in Northern Ireland remains low.
- The GP combined flu/FLI consultation rate increased from 15.4 per 100,000 population in week 15 to 20.6 per 100,000 population in week 16 (34% increase), however this increase is expected given the bank holiday period in the previous week.
- Out-of-hours call rates for flu/FLI decreased from 7.0 per 100,000 population in week 15 to 5.0 per 100,000 population in week 16.
- There were 14 influenza A(H3) and seven influenza A (untyped) detections in week 16, 2012.
- There were three RSV detections in week 16, 2012.
- One confirmed influenza A(H3) case was admitted to critical care in Northern Ireland in week 16 bringing the total admitted to critical care with confirmed influenza so far this season to ten.
- There have been no reports of any laboratory confirmed influenza deaths in patients admitted to critical care in week 16.
- There were two respiratory outbreaks reported to PHA in week 16, both of which were confirmed as influenza A(H3). To date this season there have been nine influenza A(H3) outbreaks reported to the PHA.
- The decrease in the proportion of influenza-positive sentinel specimens, together with the fact that the majority of countries are reporting a continuously decreasing incidence of ILI or ARI, indicate that the seasonal peak has passed in almost all European countries. However, the proportion of positive specimens indicates that influenza is still circulating in Europe.

Introduction

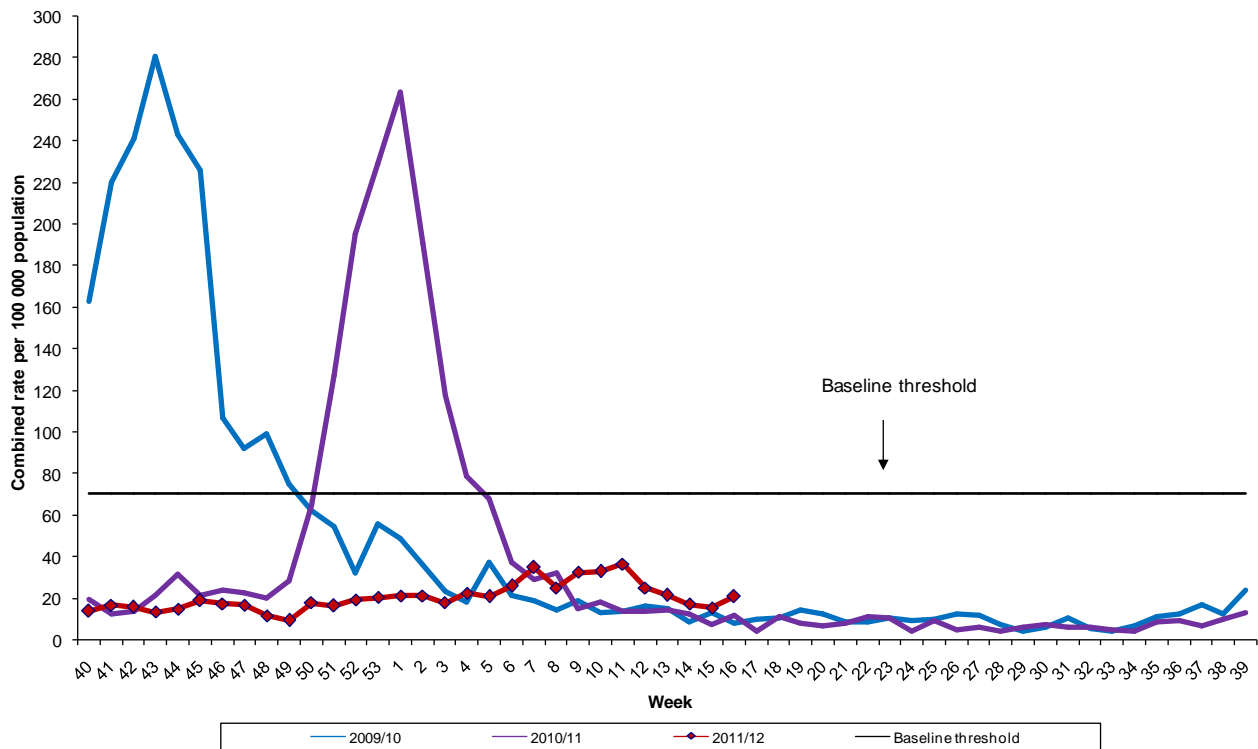
In order to monitor influenza activity in Northern Ireland a number of surveillance systems are in place. A new development for the 2011/12 season is surveillance of critical care patients in hospitals with confirmed influenza.

Additional surveillance systems are:

- GP sentinel surveillance representing 11.7% of Northern Ireland population;
- GP out-of-hours surveillance system;
- Virological reports from the Regional Virus Laboratory (RVL);
- Mortality data from Northern Ireland Statistics and Research Agency (NISRA).

Sentinel GP consultation data

Figure 1. Sentinel GP consultation rate for combined flu and flu-like illness 2009/10 – 2011/12

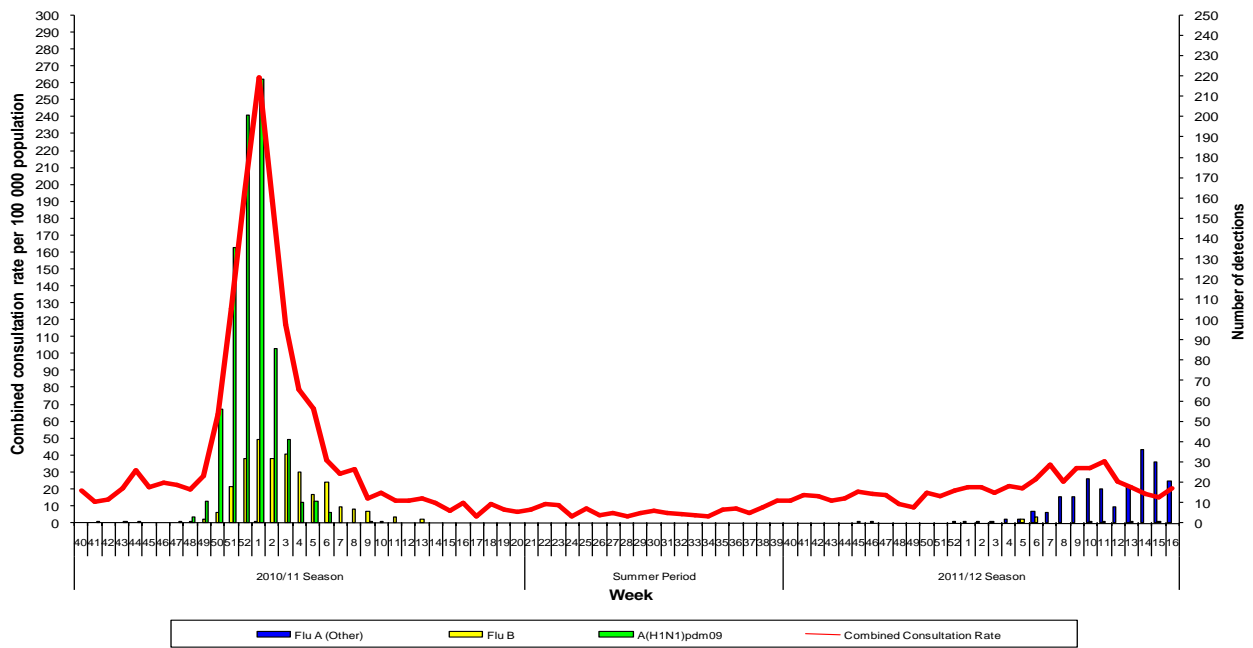


Note: 2009 had 53 weeks for surveillance purposes, therefore, an additional data point has been inserted in the graph for 2010/11 and 2011/12 at week 53 based on the average of weeks 52 and 1.

Comment

The GP combined flu/FLI consultation rate increased from 15.4 per 100,000 population in week 15 to 20.6 per 100,000 population in week 16 (34% increase), however this increase is expected given the bank holiday period in the previous week. Rates remain higher than the same weeks last year but remain well below the Northern Ireland threshold of 70 per 100,000 population (Figures 1 and 2).

Figure 2. Sentinel GP consultation rate for combined flu and flu-like illness and number of virology flu detections from week 40 2010



Comment

All flu/FLI age-specific consultation rates have increased compared to week 15, however they continue to remain low. The flu/FLI rates for the 0–4 year age group increased sharply, however this is due to small numbers in this age group (Figure 3).

Figure 3. Sentinel GP age-specific consultation rates for combined flu and flu-like illness from week 40 2010

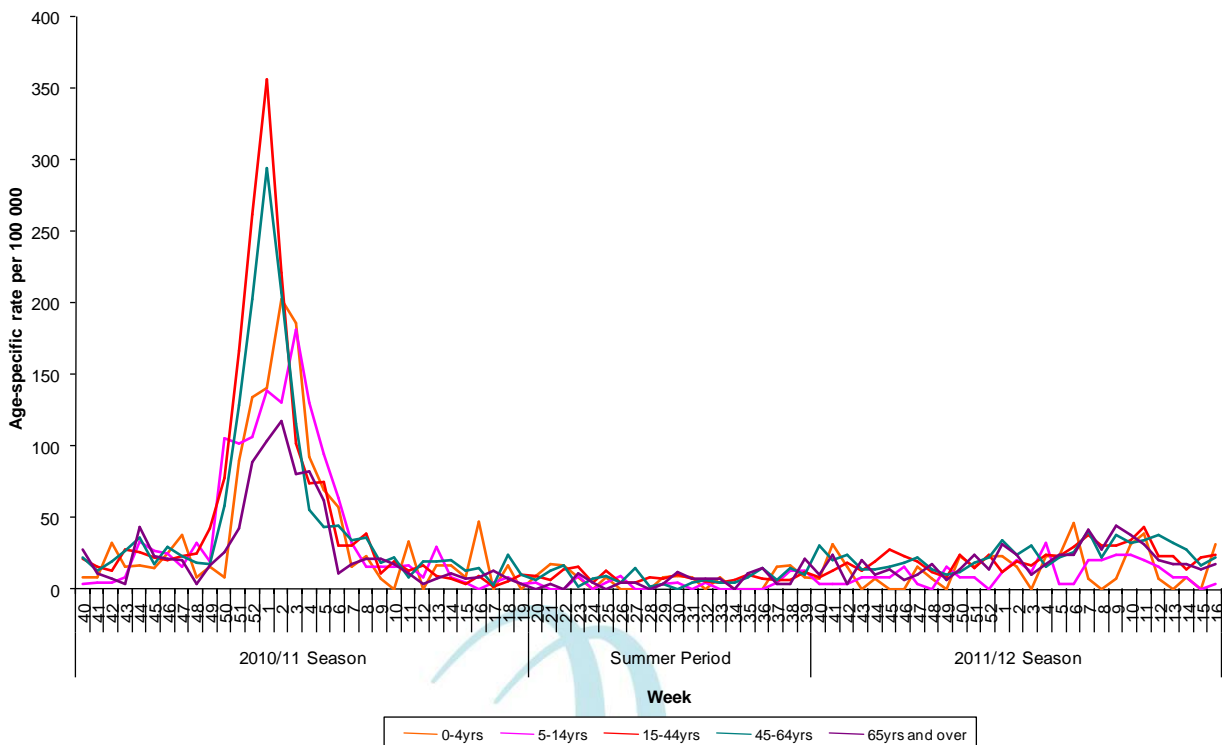
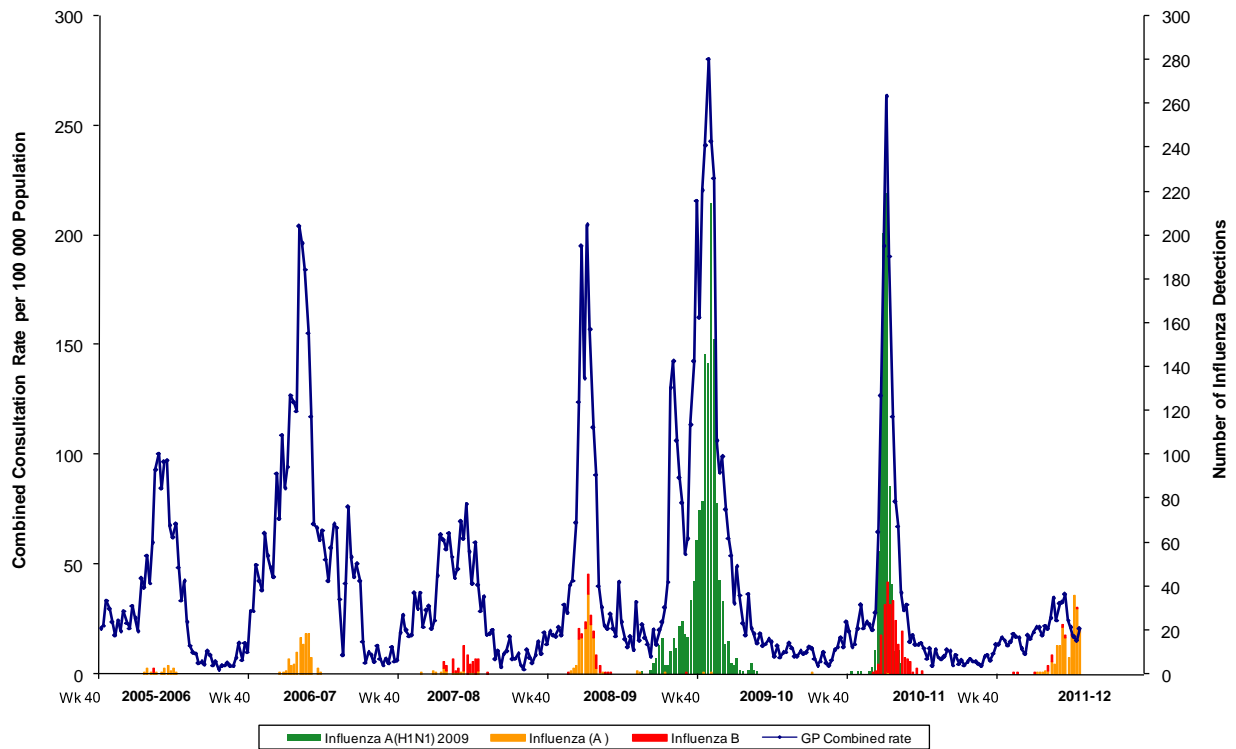


Figure 4. Sentinel GP combined consultation rate and number of influenza positive detections 2005/06 – present.



Comment

Sentinel GP flu/FLI combined consultation rates and numbers of positive influenza detections by type from 2005/2006 influenza season to present can be seen in Figure 4.

Out-of-hours (OOH) centres call data

Figure 5. OOH total call rate (all diagnoses) and call rate for flu and flu-like illness from week 40 2010

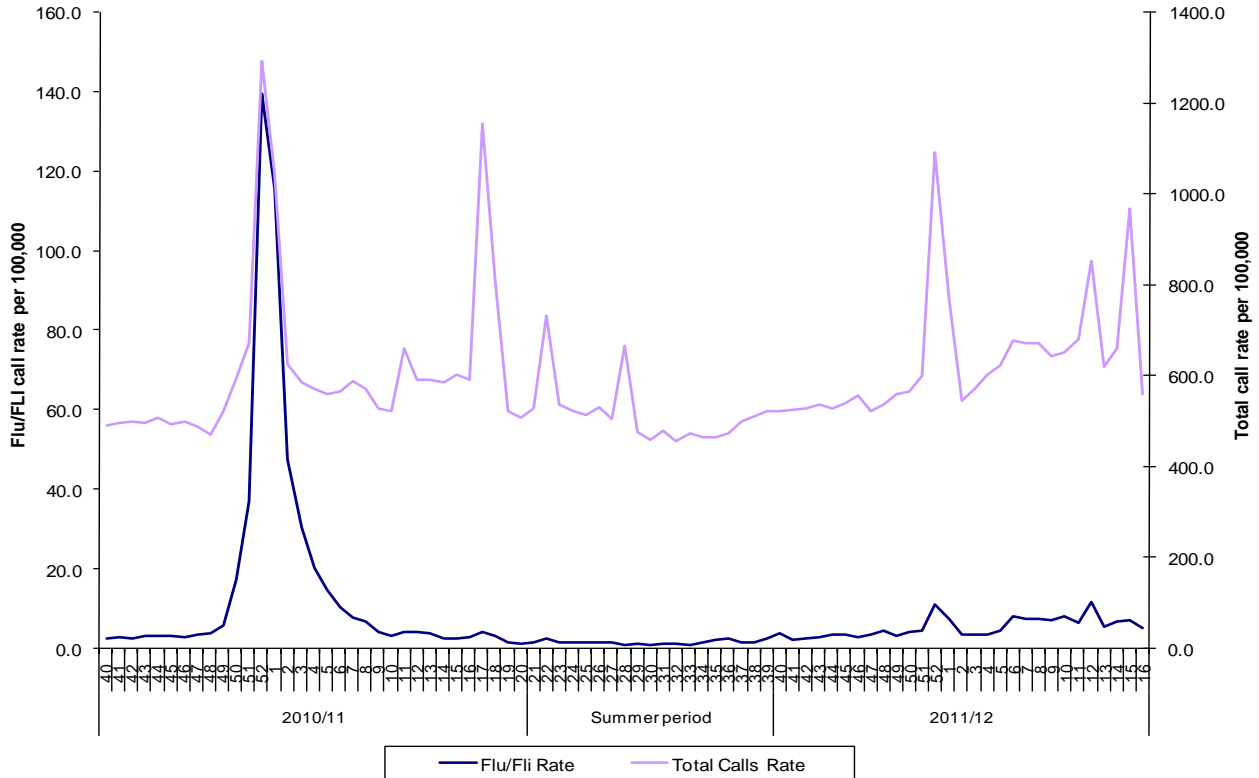
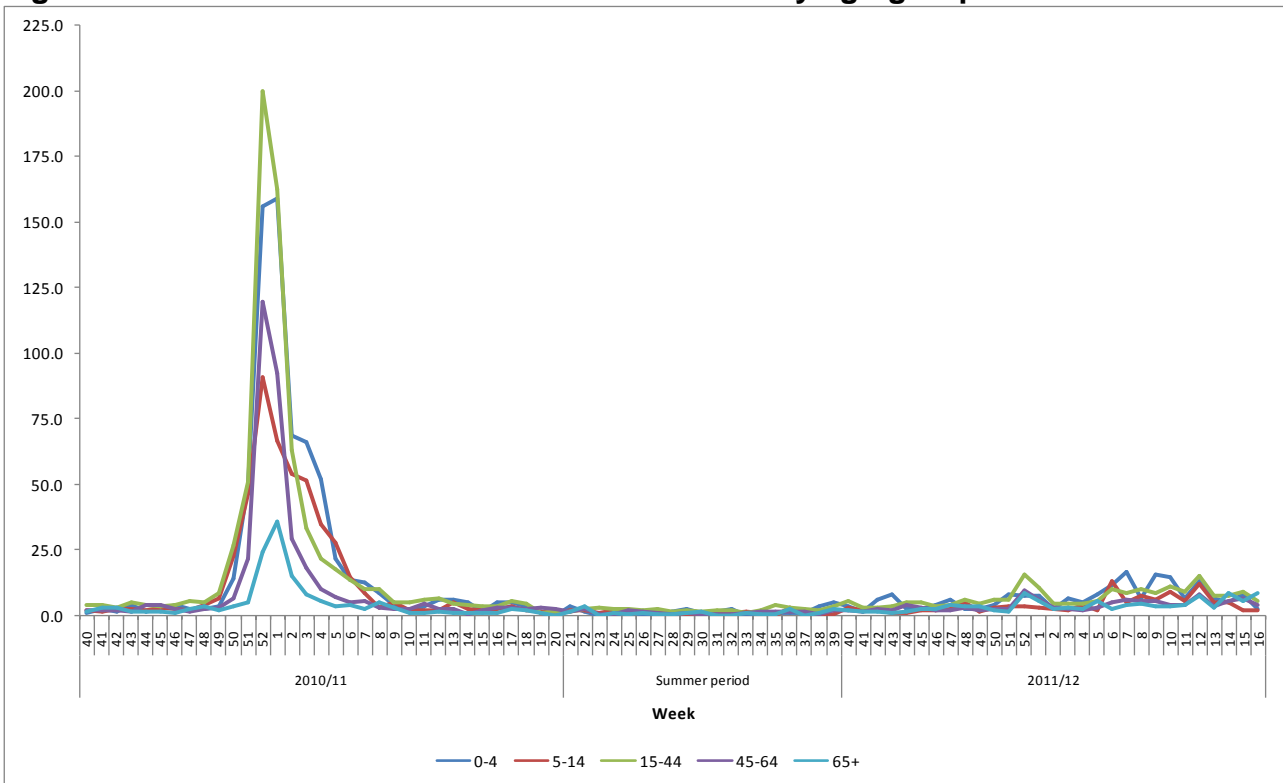


Figure 6. OOH call rates of flu and flu-like illness by age-group from week 40 2010



Comment

Out-of-hours call rates for flu/FLI decreased from 7.0 per 100,000 population in week 15 to 5.0 per 100,000 population in week 16. Rates for week 16 remain higher than the same week last year (3.0 per 100,000 population). The highest age specific rate in week 16 was in the over 65 year age group. Age-specific rates remain low with small numbers in some of the age groups contributing to fluctuations in rates (Figures 5 and 6).

Virology data

Table 1. Virus activity in Northern Ireland Week 16 2012

Source	Specimens tested	AH3	A (untyped)	Influenza B	RSV	Total influenza positive	% Influenza Positive
Sentinel	5	0	1	0	0	1	20%
Non-sentinel	127	14	6	0	3	20	16%
Total	132	14	7	0	3	21	16%

Table 2. Cumulative total week 40 2011 - Week 16 2012

	AH3	A (untyped)	Flu B	Total Influenza	RSV
0-4	54	2	3	59	657
5-14	16	1	2	19	19
15-64	40	4	5	49	25
65+	74	5	2	81	16
Unknown	0	0	0	0	0
All ages	184	12	12	208	717

Table 3. Cumulative total week 40 2011 - week 16 2012

	Sentinel					Non-sentinel				
	AH3	A (untyped)	Flu B	Total influenza	RSV	AH3	A (untyped)	Flu B	Total influenza	RSV
0-4	2	0	0	2	2	52	2	3	57	655
5-14	1	0	0	1	0	15	1	2	18	19
15-64	3	1	1	5	2	37	3	4	44	23
65+	3	0	0	3	0	71	5	2	78	16
Unknown	0	0	0	0	0	0	0	0	0	0
All ages	9	1	1	11	4	175	11	11	197	713

Note

All virology data is provisional. The virology figures for previous weeks included in this bulletin are updated with data from laboratory returns received after the production of the last bulletin. The current bulletin reflects the most up-to-date information available.

Sentinel and non-sentinel samples are tested for influenza and for RSV.

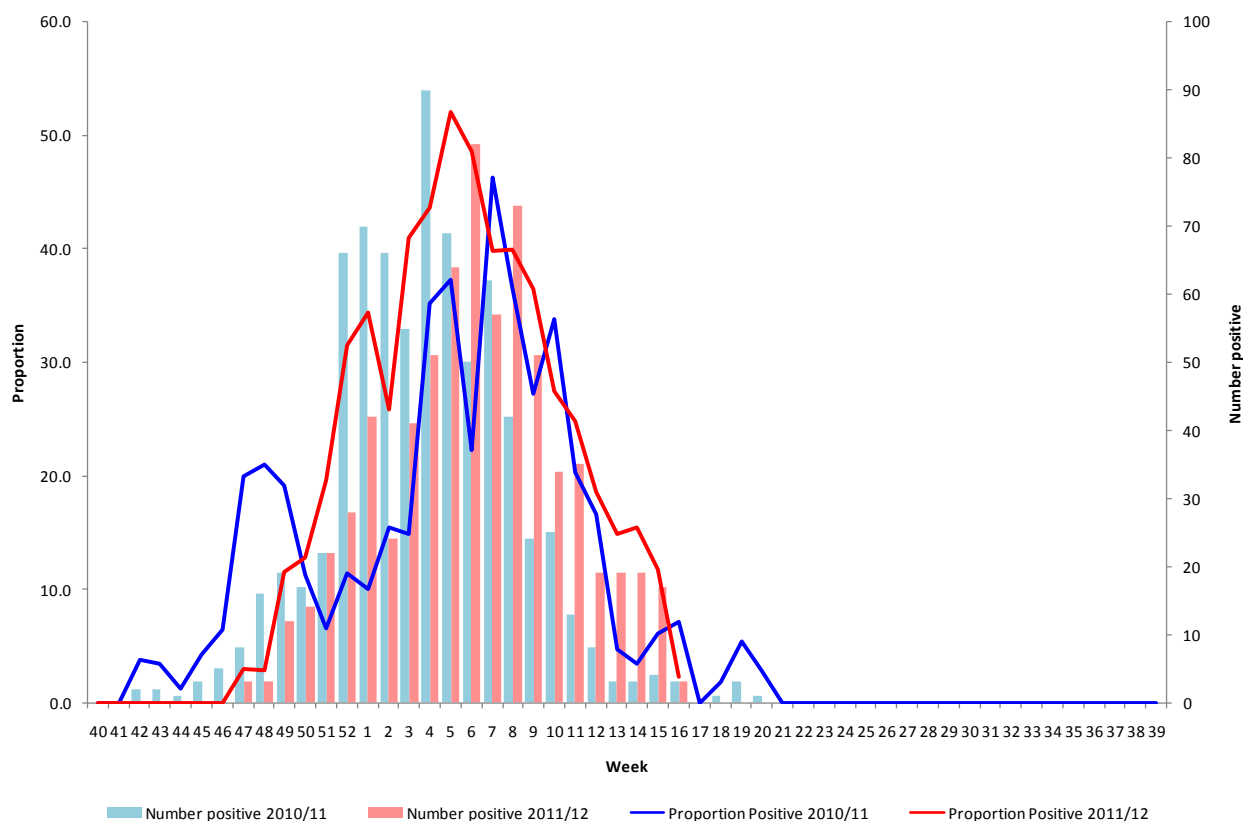
Cumulative reports of influenza A (untyped) may vary from week to week as these may be subsequently typed in later reports.

Comment

There were 132 specimens (5 sentinel and 127 non-sentinel) tested by the RVL during week 16, 2012. Fourteen influenza A(H3) and six influenza A (untyped) were reported from non-sentinel sources, with one additional influenza A (untyped) positive detection reported from sentinel sources. This brings the total laboratory confirmed influenza detections this season to 208 (7%): 184 influenza A(H3), 12 influenza A(untyped) and 12 influenza B, (Tables 1 – 3).

Respiratory syncytial virus

Figure 7. Number of non-sentinel samples tested for RSV and proportion positive 2010/11 and 2011/12



Comment

The proportion of specimens that tested positive for RSV continues to decrease with the proportion falling from 12% (updated) in week 15 to 2% in week 16. The proportion of positive RSVs for week 16 is lower than the same week last year (7%). The proportion of RSV positive specimens peaked at 52% in week 5 2012. Of 3254 non-sentinel specimens tested by the RVL this season to date, 22% (n=717) were positive for RSV with 92% of detections in the 0-4 year age group. In week 16 there were 3 detections compared with 17 (updated) detections in week 15 (Figure 7).

Hospital surveillance

One confirmed influenza A(H3) case was admitted to critical care in Northern Ireland in week 16, bringing the total admitted to critical care with confirmed influenza A(H3) so far this season to 10.

In the UK, since week 40 2011, there have been a total of 249 ICU/HDU influenza admissions across the UK reported through the USISS mandatory scheme with 24 (9.6%) resulting from influenza A(H1N1)pdm09, 80 (32.1%) from influenza A(H3N2), 131 from A (subtype not known) and 14 (5.6%) from influenza B.

Mortality surveillance

There were no reports of any laboratory confirmed influenza deaths in patients admitted to critical care in week 16. There has been a total of one confirmed influenza death in patients admitted to critical care in Northern Ireland to date this season.

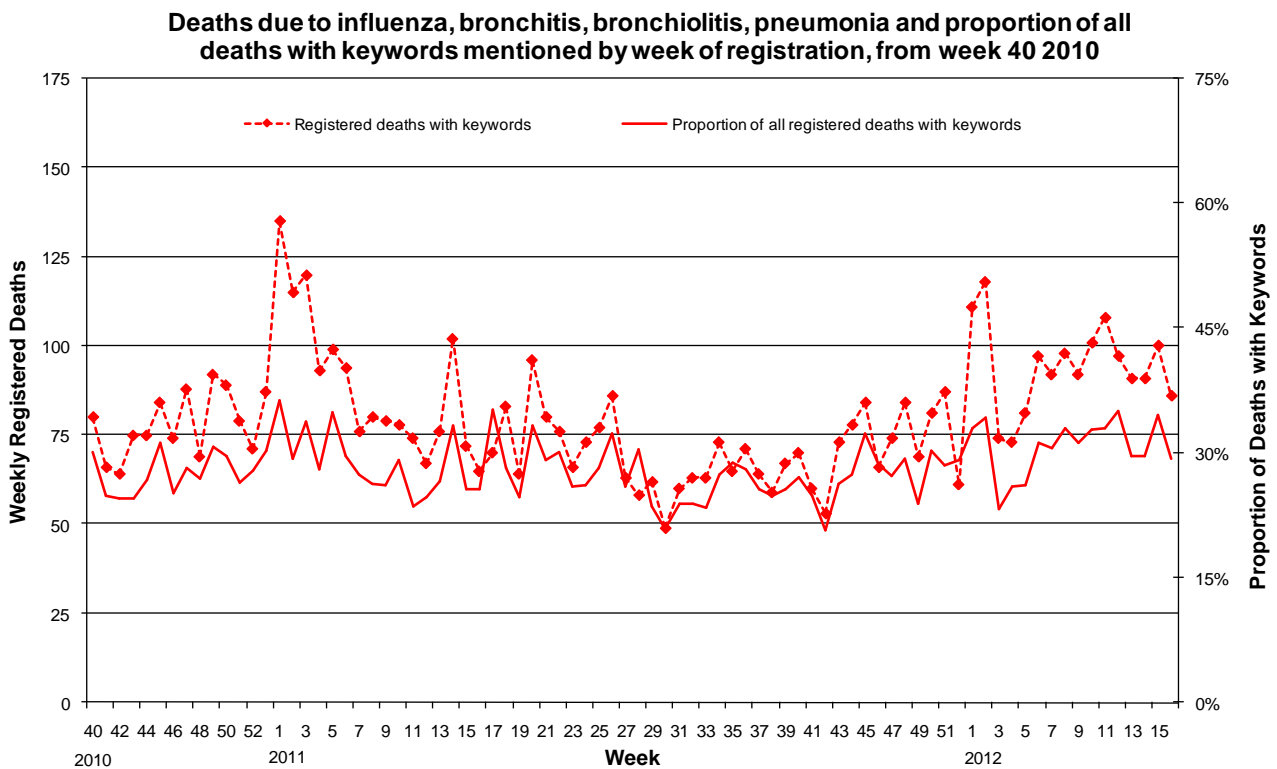
Outbreak surveillance

There were two respiratory outbreaks (both confirmed influenza A(H3)) in residential care units reported to the Public Health Agency during week 16. This brings the total number of outbreaks reported up until week 16 to 11 (9 confirmed influenza A(H3)).

Mortality data

Weekly mortality data is provided from Northern Ireland Statistics and Research Agency. The data relates to the number of deaths from selected respiratory infections (some of which may be attributable to influenza, and other respiratory infections or complications thereof) registered each week in Northern Ireland. This is not necessarily the same as the number of deaths occurring in that period. Searches of the medical certificates of the cause of death are performed using a number of keywords that could be associated with influenza (bronchiolitis, bronchitis, influenza and pneumonia). Death registrations containing these keywords are presented as a proportion of all registered deaths.

Figure 8. Weekly registered deaths



Comments:

The proportion of deaths related to respiratory keywords decreased from 34% in week 15 to 29% in week 16. In week 16 there were 294 registered deaths of which 86 related to these specific respiratory infections.

Vaccine uptake

As at the end of March 2012, the proportion of people in Northern Ireland aged 65 years and over who had received the seasonal influenza vaccine was 77.0%, while the uptake in those aged under 65 in an at-risk group was 81.7%. This compares with 74.9% uptake in the over 65 years, and 78.7% in the under 65 at-risk group for the same period last year.

International summary

Europe

The 2011/12 influenza season started late, has been without any clear geographic progression across Europe and has been declining in an increasing number of countries since around week nine. The following points are noteworthy in week 15:

- Decreasing trends were reported by 14 countries, thirteen of which have been doing so for at least two consecutive weeks.
- Of 302 sentinel specimens tested, 29.1% were positive for influenza virus. This proportion has decreased for seven consecutive weeks from a peak of nearly 60% in week eight.
- Of 88 positive sentinel specimens, 30 (34.1%) were type B. This proportion has been steadily rising.
- Since week 40/2011, 1710 SARI cases, including 101 fatalities, have been reported by seven countries. Of these cases, most were influenza-related.

The decrease in the proportion of influenza-positive sentinel specimens, together with the fact that the majority of countries are reporting a continuously decreasing incidence of ILI or ARI, indicate that the seasonal peak has passed in almost all European countries. However, the proportion of positive specimens indicates that influenza is still circulating in Europe and that B viruses are making an increasingly important contribution.

http://ecdc.europa.eu/EN/HEALTHTOPICS/SEASONAL_INFLUENZA/EPIDEMIOLOGICAL_DATA/Pages/Weekly_Influenza_Surveillance_Overview.aspx

USA

During week 15 (April 8-14, 2012), influenza activity was elevated in some areas of the United States, but declined nationally and in most regions.

An overview of the US influenza can be viewed on <http://www.cdc.gov/flu/weekly/>

Canada

The peak of activity for the 2011-2012 influenza season in Canada has passed as most indicators of influenza activity continue to decline. However, activity remains elevated in some regions of the country (ie Atlantic Region, Ontario, Alberta and British Columbia).

http://www.phac-aspc.gc.ca/fluwatch/11-12/w15_12/index-eng.php

Worldwide (WHO)

As at 13 April 2012:

- In most areas of the northern hemisphere temperate regions, influenza activity appears to have peaked and is declining. In North America, influenza indicators have remained elevated in some areas of the United States of America, but declined in the last couple of weeks. Although, activity remains elevated across several regions in Canada, declining trends have started to be observed. Similarly, in Europe and northern Asia, nearly every country has now passed its peak of transmission and has reported declining activity.
- The most commonly detected virus type or subtype throughout Europe and North America (except Mexico) has been influenza A(H3N2), although the proportion of influenza B detection has been increasing toward the end of the season in North America. In Mexico influenza A(H1N1)pdm09 has been the most common influenza virus circulating; China and the surrounding countries of northern Asia are still reporting a predominance of influenza type B virus.
- Increasing genetic and antigenic diversity has been noted in H3N2 viruses in the later part of the influenza season.
- No significant change in antiviral resistance has been reported so far this season.

http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

Further information

Further information on influenza is available at the following websites:

<http://www.fluawareni.info> Now on Facebook (Flu Aware NI)

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

<http://www.publichealth.hscni.net>

<http://www.who.int>

<http://ecdc.europa.eu>

<http://euroflu.org>

Detailed influenza weekly reports can be found at the following websites:

England, Scotland and Wales:

<http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/SeasonalInfluenza/EpidemiologicalData/>

Republic of Ireland:

<http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/Surveillance/InfluenzaSurveillanceReports/20112012Season/>

For further information on the Enhanced Surveillance of Influenza in Northern Ireland scheme or to be added to the circulation list for this bulletin please contact:

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This report was compiled by Cathriona Kearns, Paul Cabrey, and Dr. Brian Smyth.