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Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 17 – 18 (23 April – 6 May 2012)

Summary

- Influenza activity in Northern Ireland continues to remain low.
- The GP combined flu/FLI consultation rate decreased from 20.6 per 100,000 population in week 16 to 11.6 per 100,000 population in week 17 and 12.6 per 100,000 population in week 18.
- Out-of-hours (OOH) call rates for flu/FLI decreased from 5.0 per 100,000 population in week 16 to 3.6 and 3.8 per 100,000 population in weeks 17 and 18, respectively.
- There were 11 influenza A(H3) and three influenza A (untyped) detections in weeks 17 and 18, 2012.
- There were nine RSV detections in weeks 17 and 18, 2012.
- There were no confirmed influenza cases admitted to critical care in Northern Ireland in weeks 17 and 18.
- There have been no reports of any laboratory confirmed influenza deaths in patients admitted to critical care in weeks 17 and 18.
- There were two respiratory outbreaks reported to PHA in weeks 17 and 18, both of which were confirmed as influenza A(H3). To date this season there have been 10 influenza A(H3) outbreaks reported to the PHA.
- The influenza season is drawing to a close and transmission is declining. However, although decreasing since week 9/2012, virological and epidemiological indicators of influenza activity show that influenza viruses are still circulating in some EU countries.

Introduction

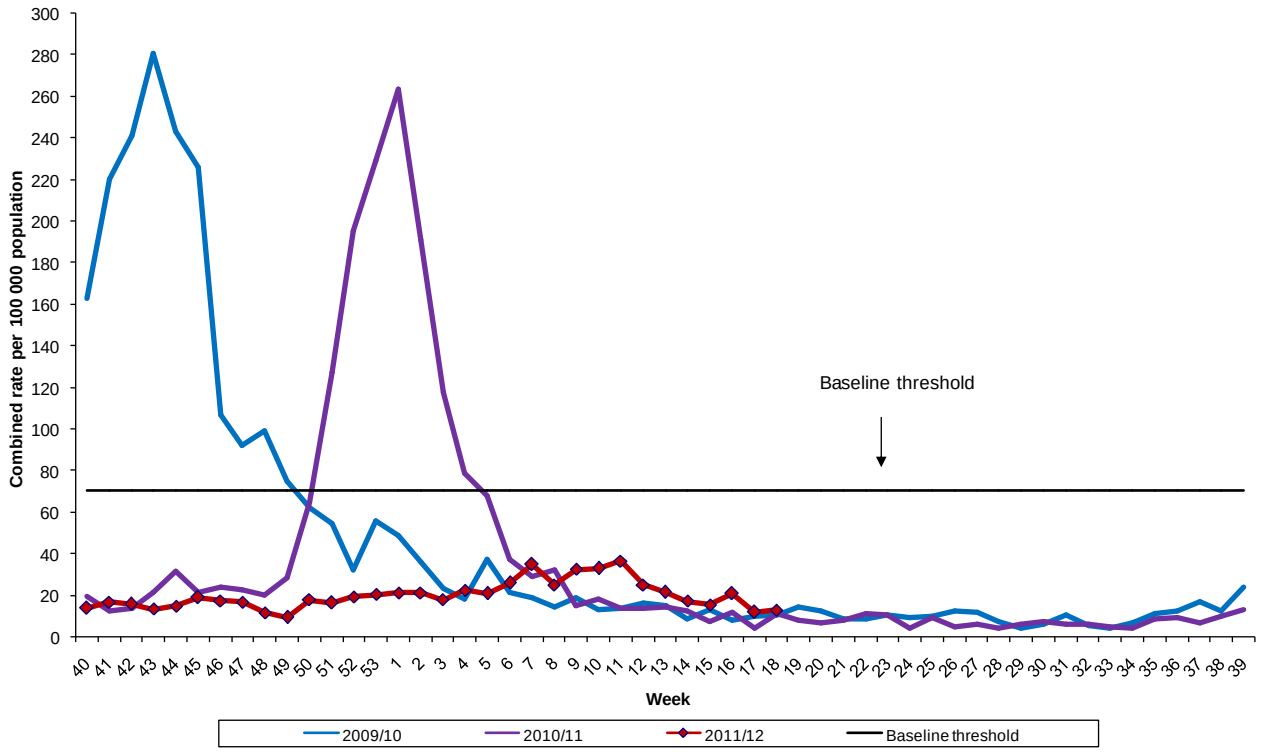
In order to monitor influenza activity in Northern Ireland a number of surveillance systems are in place. A new development for the 2011/12 season is surveillance of critical care patients in hospitals with confirmed influenza.

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

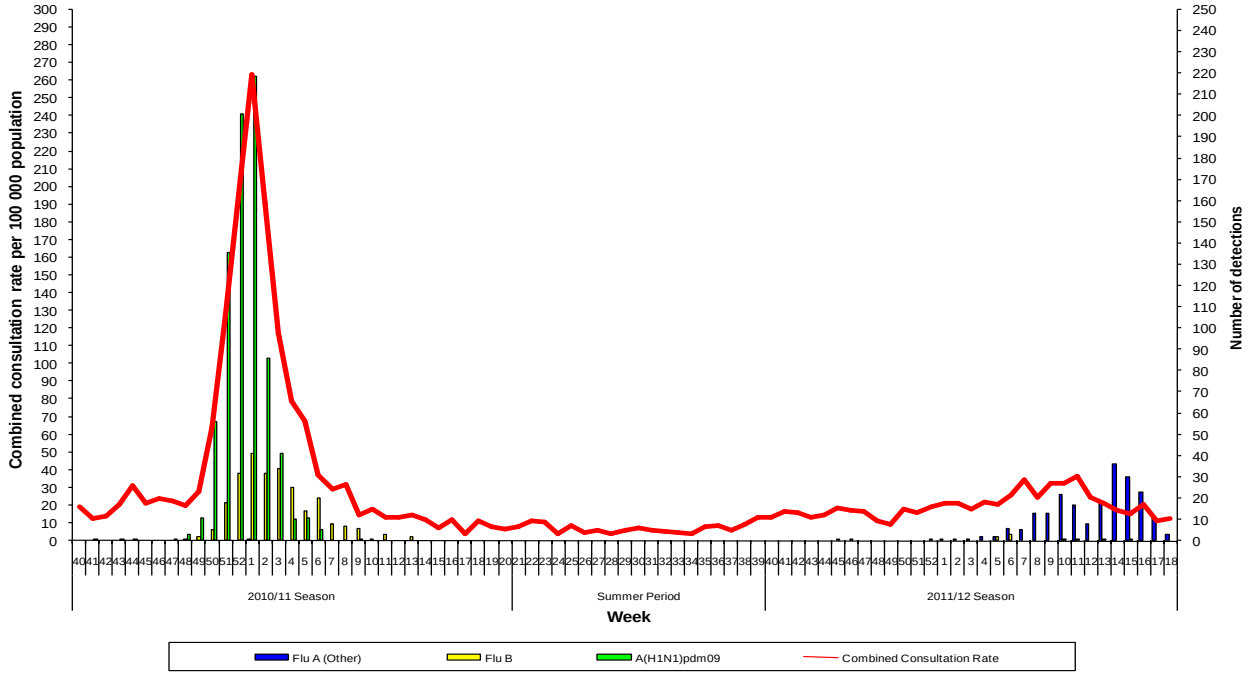


Note: 2009 had 53 weeks for surveillance purposes, therefore, an additional data point has been inserted in the graph for 2010/11 and 2011/12 at week 53 based on the average of weeks 52 and 1.

Comment

The GP combined flu/FLI consultation rate decreased from 20.6 per 100,000 population in week 16 to 11.6 per 100,000 population in week 17 and 12.6 per 100,000 population in week 18. Rates remain slightly higher than the same weeks last year but are 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

Flu/FLI age-specific consultation rates continue to remain low. The highest age specific rate in week 18 was in the 15–44 year age group, with a slight increase in the 45–64 year age group compared with week 17. There were no cases reported in the 0–4 year age group in week 18. Small numbers in some of the age groups contributing to fluctuations in rates (Figure 3).

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

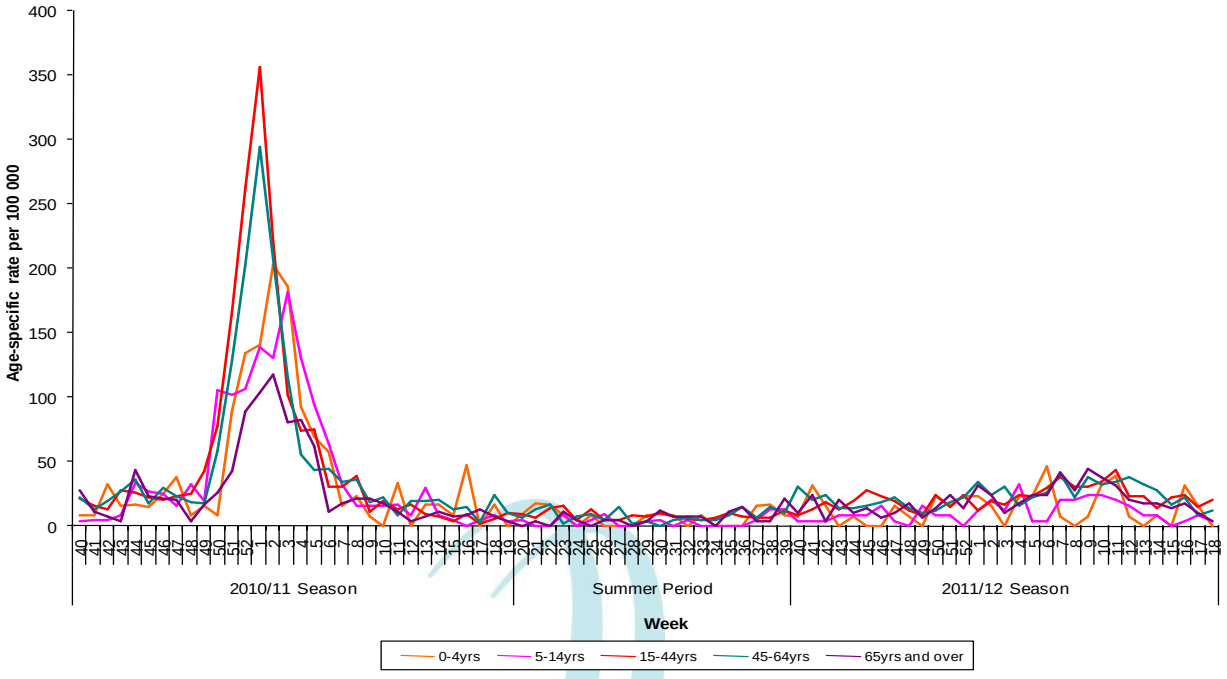
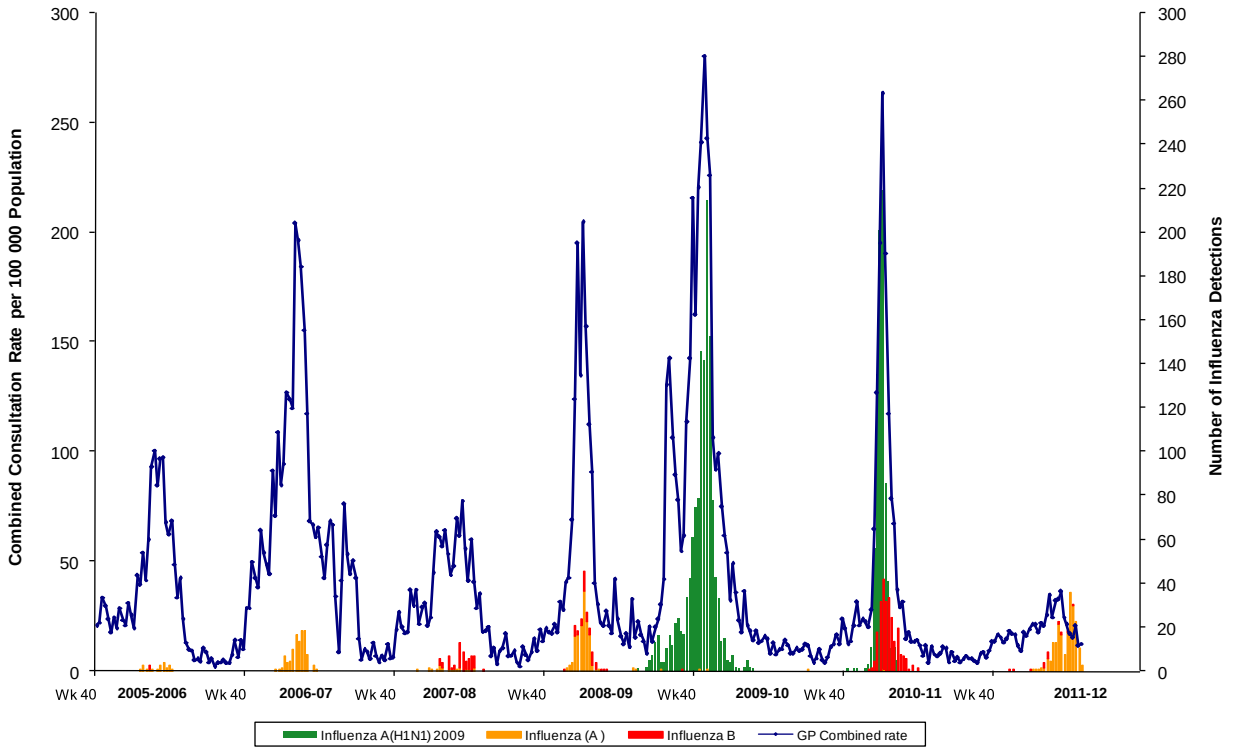


Figure 4. Sentinel GP combined consultation rate and number of influenza positive detections 2005–06 to present.



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 centres call data

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

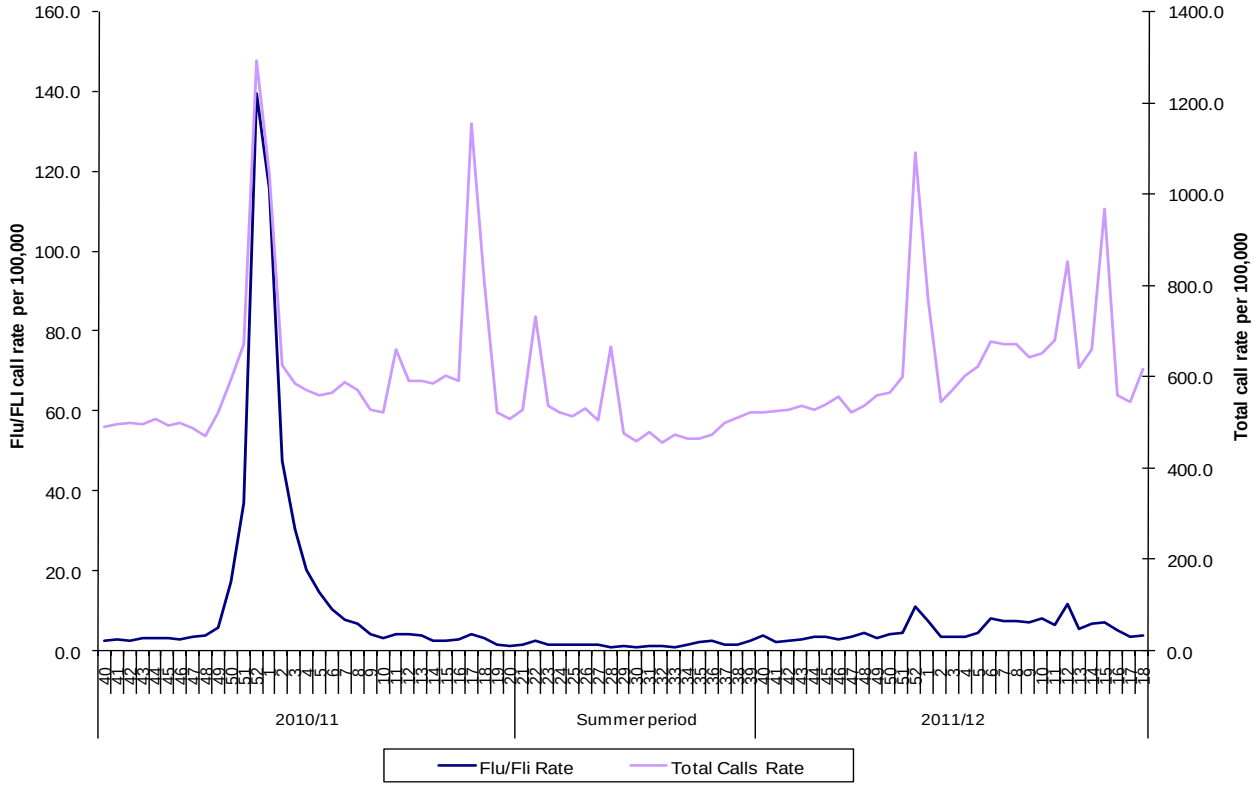
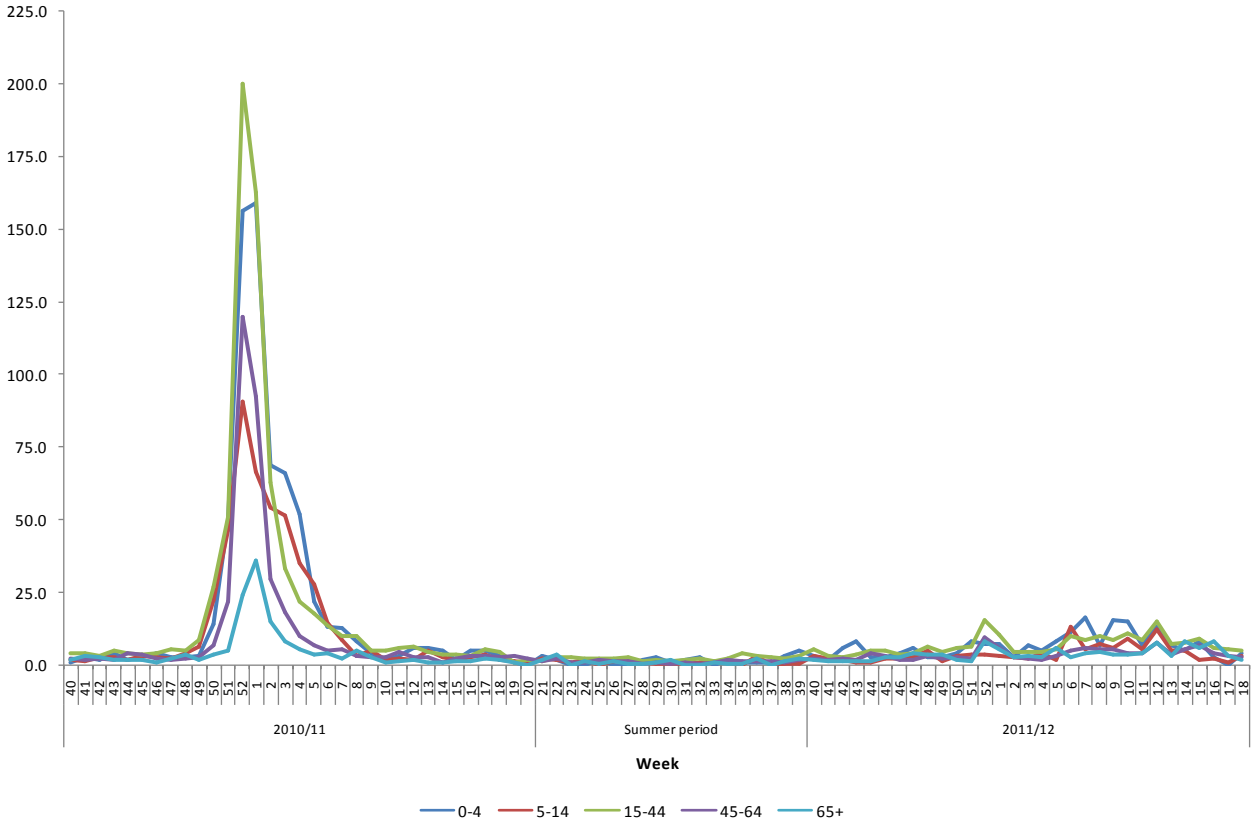


Figure 6. OOH call rates of flu and flu-like illness by age-group from week 40 2010



Comment

Out of hours call rates for flu/FLI decreased from 5.0 per 100,000 population in week 16 to 3.6 and 3.8 per 100,000 population in weeks 17 and 18, respectively. Rates for the same weeks last year were 4.2 and 3.0 per 100,000 population, respectively. The highest age specific rate in both weeks 17 and 18 was in the 15–44 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 Weeks 17 –18 2012

Source	Specimens tested	AH3	A (untyped)	Influenza B	RSV	Total influenza positive	% Influenza positive
Sentinel	13	2	1	0	0	3	23%
Non-sentinel	166	9	2	0	9	11	7%
Total	**179**	**11**	**3**	**0**	**9**	14	**8%**

Table 2. Cumulative total week 40 2011 – week 18 2012

	AH3	A (untyped)	Flu B	Total influenza	RSV
0-4	57	1	3	**61**	666
5-14	17	0	2	**19**	20
15-64	43	6	5	**54**	26
65+	86	2	2	**90**	16
Unknown	0	0	0	**0**	0
All ages	**203**	**9**	**12**	**224**	**728**

Table 3. Cumulative total week 40 2011 – week 18 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	55	1	3	**59**	664
5-14	1	0	0	**1**	0	16	0	2	**18**	20
15-64	4	2	1	**7**	2	39	4	4	**47**	24
65+	4	0	0	**4**	0	82	2	2	**86**	16
Unknown	0	0	0	**0**	0	0	0	0	**0**	0
All ages	**11**	**2**	**1**	**14**	**4**	**192**	**7**	**11**	**210**	**724**

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.

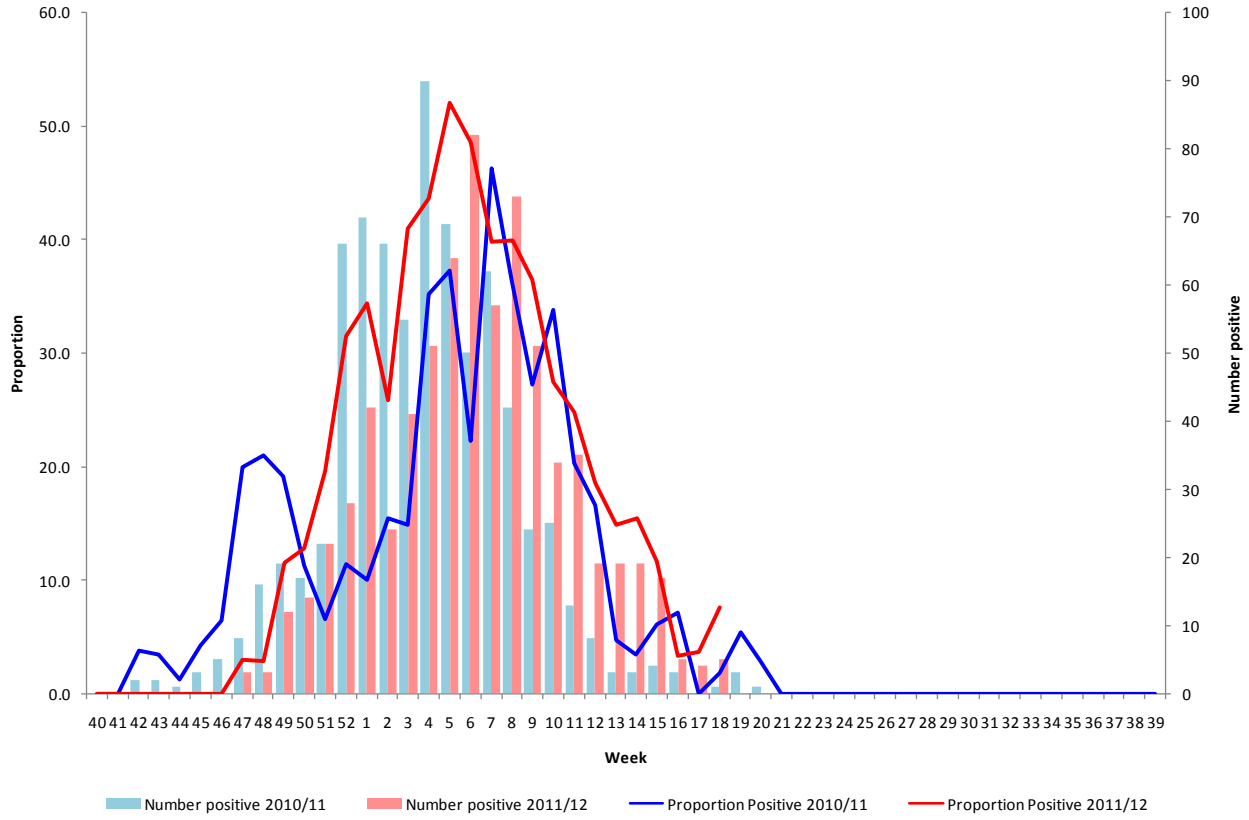
Cumulative reports of influenza A (untyped) may vary from week to week as these may be subsequently typed in later reports.

Comment

There were 179 specimens (13 sentinel and 166 non-sentinel) tested by the RVL during weeks 17 and 18, 2012. Nine influenza A(H3) and two influenza A (untyped) were reported from non-sentinel sources, with two influenza A(H3) and one influenza A (untyped) positive detections reported from sentinel sources. This brings the total laboratory confirmed influenza detections this season to 224 (7%): 203 influenza A(H3), 9 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 has increased with the proportion rising from 3% (updated) in week 16 to 8% in week 18. The proportion of positive RSVs for both weeks 17 and 18 is higher than the same weeks last year (0% and 2%, respectively). However, small numbers will influence fluctuations in the proportions. The proportion of RSV positive specimens peaked at 52% in week 5 2012. Of 3299 non-sentinel specimens tested by the RVL this season to date, 22% (n=728) were positive for RSV with 91% of detections in the 0-4 year age group. In weeks 17 and 18 there were nine detections compared with 22 (updated) detections in the previous two weeks (Figure 7).

Hospital surveillance

There were no confirmed influenza cases admitted to critical care in Northern Ireland in weeks 17 and 18. However, there were two cases (updated) admitted to ICU with influenza in week 16 which now brings the total admitted to critical care with confirmed influenza so far this season to 11.

In the UK, since week 40 2011, there have been a total of 260 ICU/HDU influenza admissions across the UK reported through the USISS mandatory scheme with 25 (9.6%) resulting from influenza A(H1N1)pdm09, 83 (31.9%) from influenza A(H3N2), 135 from A (subtype not known) and 17 (6.5%) from influenza B.

Mortality surveillance

There were no reports of any laboratory confirmed influenza deaths in patients admitted to critical care in weeks 17 and 18. There has been a total of one confirmed influenza death in patients admitted to critical care in Northern Ireland to date this season.

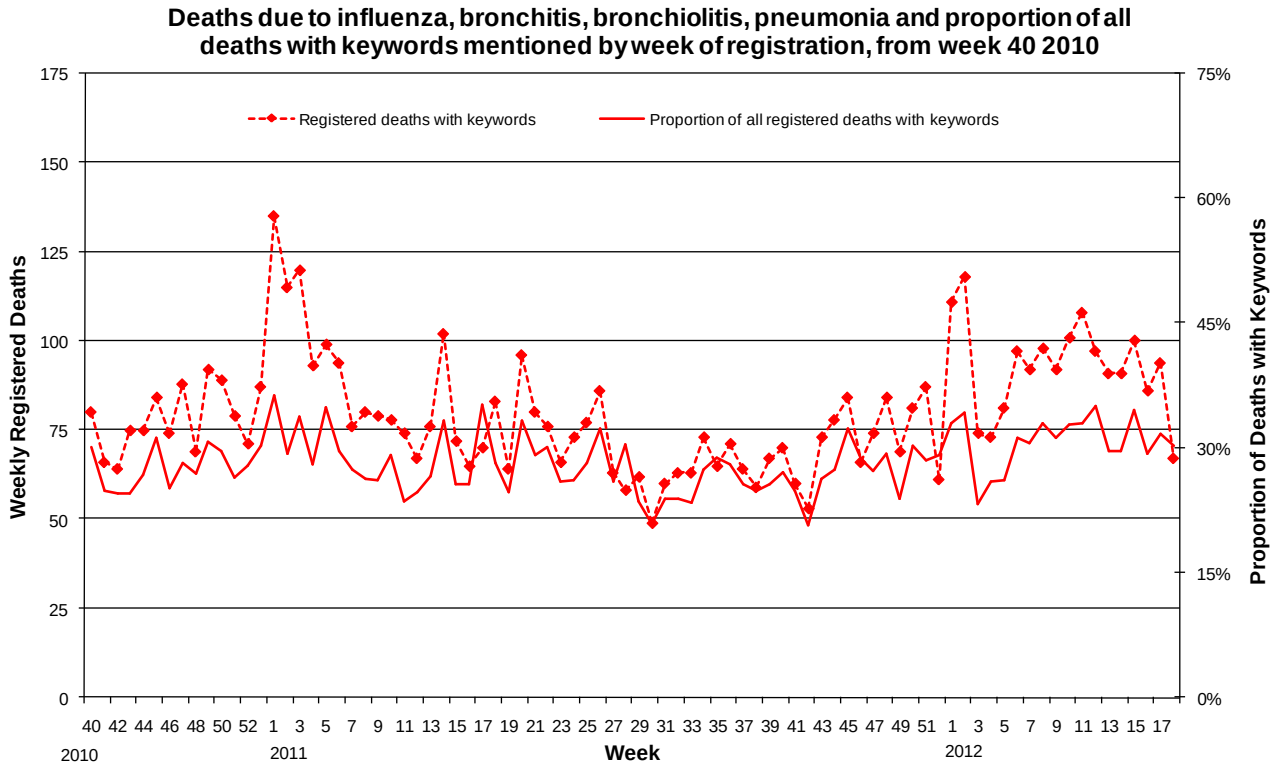
Outbreak surveillance

There were two respiratory outbreaks (one confirmed influenza A(H3)) in residential care units reported to the Public Health Agency during weeks 17 and 18. This brings the total number of outbreaks reported up until week 16 to 13 (10 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 increased slightly from 29% in week 16 to 32% and 30% in weeks 17 and 18, respectively. In weeks 17 and 18 there were 518 registered deaths of which 161 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 2011–2012 season started late and has had no clear progression, but is now approaching its end.

- In week 17, almost all reporting countries experienced low-intensity influenza activity and decreasing or stable trends.
- Of 162 sentinel specimens tested, 19.1% were positive for influenza virus, continuing the downward trend observed since week 8/2012. The proportion of B viruses continued to increase.
- The A(H3N2) influenza viruses examined at the WHO Collaborating Centre (WHO-CC) in London show increasing evidence of an imperfect match between the circulating viruses and the current relevant vaccine antigen. This supports the WHO and EMA recommendation to modify the trivalent vaccines for the 2012/2013 Northern Hemisphere season.
- One SARI case, unrelated to influenza, was reported by Slovakia.

The influenza season is drawing to a close and transmission is declining. However, although decreasing since week 9/2012, virological and epidemiological indicators of influenza activity show that influenza viruses are still circulating in some EU countries. http://ecdc.europa.eu/EN/HEALTHTOPICS/SEASONAL_INFLUENZA/EPIDEMIOLOGICAL_DATA/Pages/Weekly_Influenza_Surveillance_Overview.aspx

USA

During week 17 (April 22–28, 2012), influenza activity declined nationally and in most regions, but remained elevated in some areas of the United States.

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

Canada

Overall, influenza activity in Canada continues to decline; however, several regions are still reporting elevated influenza activity (ie in the Atlantic Region, Quebec, Ontario, and the Prairies).

http://www.phac-aspc.gc.ca/fluwatch/11-12/w17_12/index-eng.php

Worldwide (WHO)

As at 27 April 2012:

- Seasonal influenza activity has peaked in most countries in the temperate regions of the northern hemisphere.
- In North America, in general, influenza transmission is low and has been decreasing for four consecutive weeks in the USA and for three weeks in Canada. Influenza A(H3N2) viruses have predominated during the current season nationally and in most regions of USA, whereas influenza B viruses continue to be the predominant in Canada. A(H1N1)pdm09 continued to co-circulate in Canada, USA and Mexico.
- In almost all European countries the influenza season has peaked and for several weeks has been showing a continuously decreasing incidence of ILI /ARI, and a reduction in the number of SARI cases. Influenza A(H3N2) viruses have been predominant this season with increasing proportion of influenza B virus detection.
- Influenza activity in the temperate countries of Asia has shown an overall decrease. The proportion of influenza A(H3N2) virus detection has increased over influenza B in both northern China and Mongolia, but for Japan, influenza A(H3N2) viruses have been the predominant subtype throughout the season. In the Republic of Korea, influenza B viruses are still predominant over influenza A viruses.
- Influenza A(H1N1)pdm09 viruses were screened for susceptibility to neuraminidase inhibitors in nine countries in western Europe, and all tested were susceptible. However, in the USA, a slight increase to 2% in levels of resistance to oseltamivir has been noticed for influenza A(H1N1)pdm09 isolates.

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.

HSC Public Health Agency