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Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 19–20 (7– 20 May 2012)

Summary

- Influenza activity in Northern Ireland continues to remain low.
- The GP combined flu/FLI consultation rate decreased from 12.6 per 100,000 population in week 18 to 8.6 per 100,000 population in week 19 rising to 9.6 per 100,000 population in week 20.
- Out-of-hours call rates for flu/FLI increased from 3.8 per 100,000 population in week 18 to 4.6 in week 19 due to the bank holiday period, and decreased to 3.3 per 100,000 population in week 20.
- There were two influenza A(H3), one influenza A (untyped) and three influenza B detections in weeks 19 and 20, 2012.
- There were ten RSV detections in weeks 19 and 20, 2012.
- There were no confirmed influenza cases admitted to critical care in Northern Ireland in weeks 19 and 20.
- There have been no reports of any laboratory confirmed influenza deaths in patients admitted to critical care in weeks 19 and 20.
- There were no confirmed influenza outbreaks reported to PHA in weeks 19 and 20. To date this season there have been 10 influenza A(H3) outbreaks reported to the PHA.
- The 2011–2012 influenza season in Europe has been unusual. It started late, had no geographical progression, and has varied considerably in its impact from country to country. All but one of the countries submitting a report in week 19 indicated low intensity.
- Unless flu/FLI indices increase this will be the final weekly bulletin for this season with the bulletin recommencing in October 2012. A more detailed report on the 2011/12 influenza season will follow in due course.

Introduction

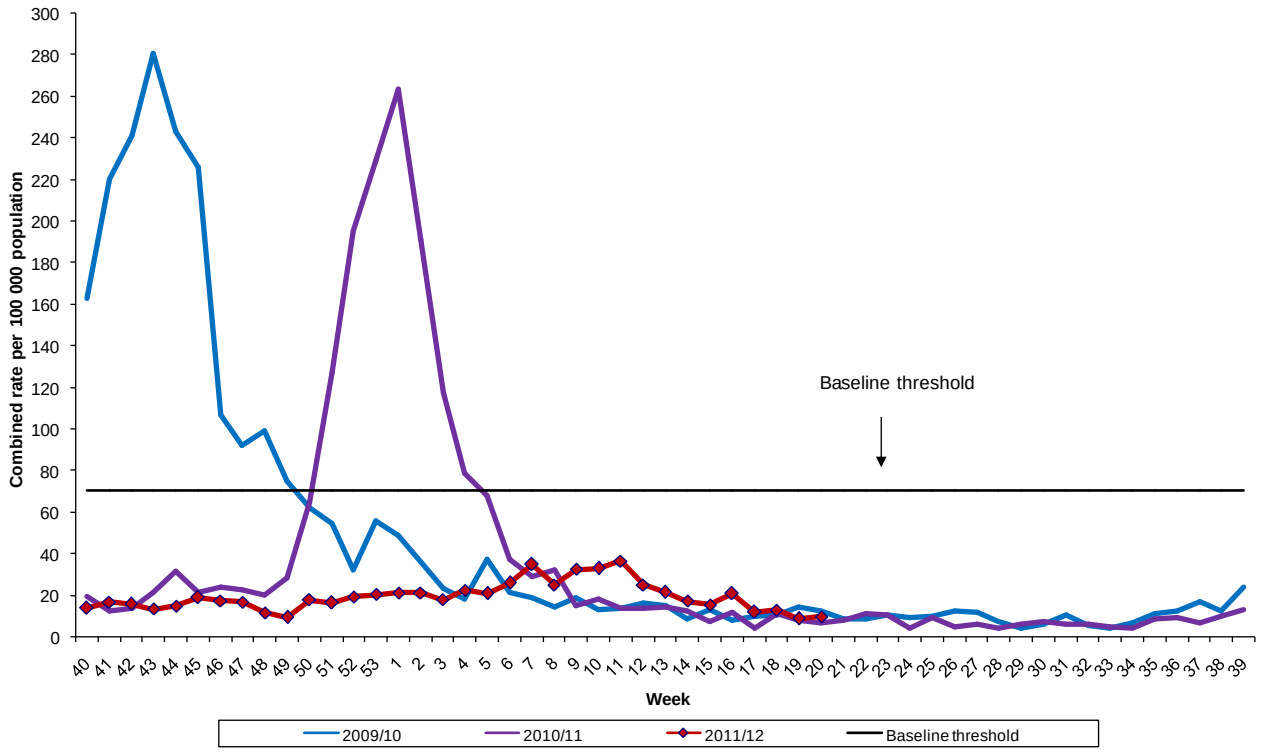
In order to monitor influenza activity in Northern Ireland a number of surveillance systems are in place. A new development for the 2011/12 season is surveillance of critical care patients in hospitals with confirmed influenza.

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 the 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

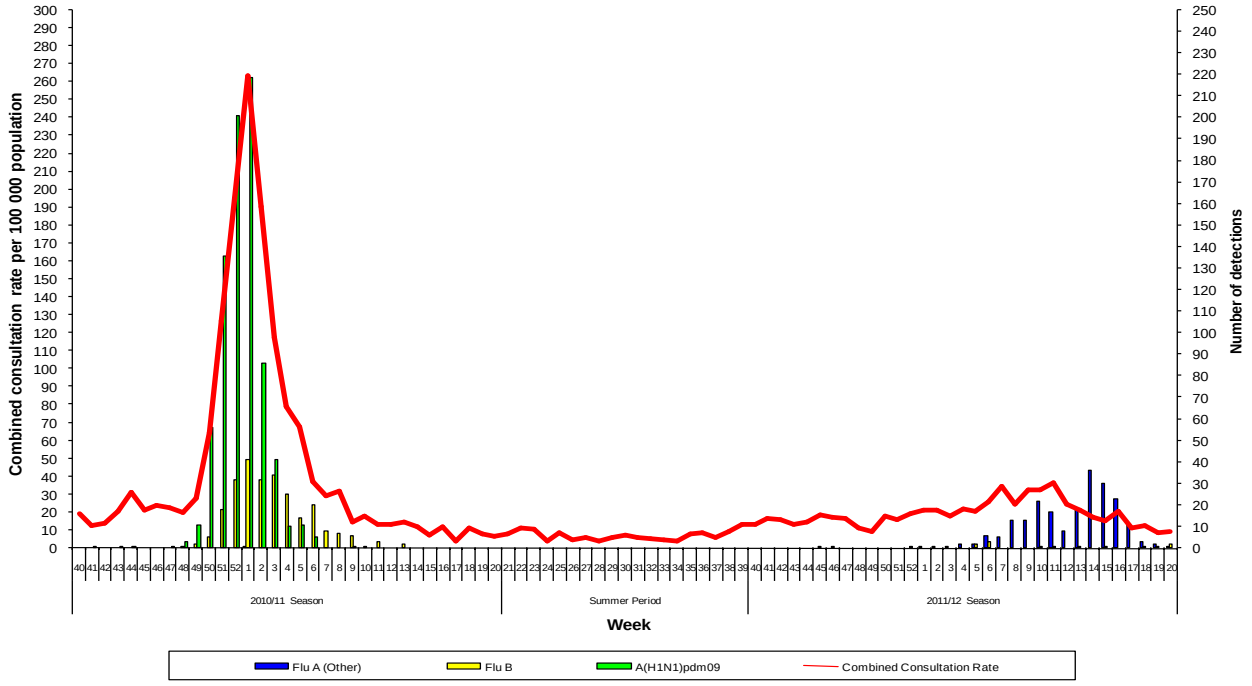


Note: 2009 had 53 weeks for surveillance purposes, therefore, an additional data point has been inserted in the graph for 2010/11 and 2011/12 at week 53 based on the average of weeks 52 and 1.

Comment

The GP combined flu/FLI consultation rate decreased from 12.6 per 100,000 population in week 18 to 8.6 per 100,000 population in week 19 rising to 9.6 per 100,000 population in week 20. Rates are slightly higher than the same weeks last year but continue to 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

With the exception of the 0–4 year age group all Flu/FLI age-specific consultation rates in week 20 have either remained steady or decreased compared to week 18, with minor fluctuations in some of the age groups in week 19. The highest age specific rate in week 19 was in the over 65 year age group and in the 15–44 year age group in week 20. Small numbers in some of the age groups may contribute 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

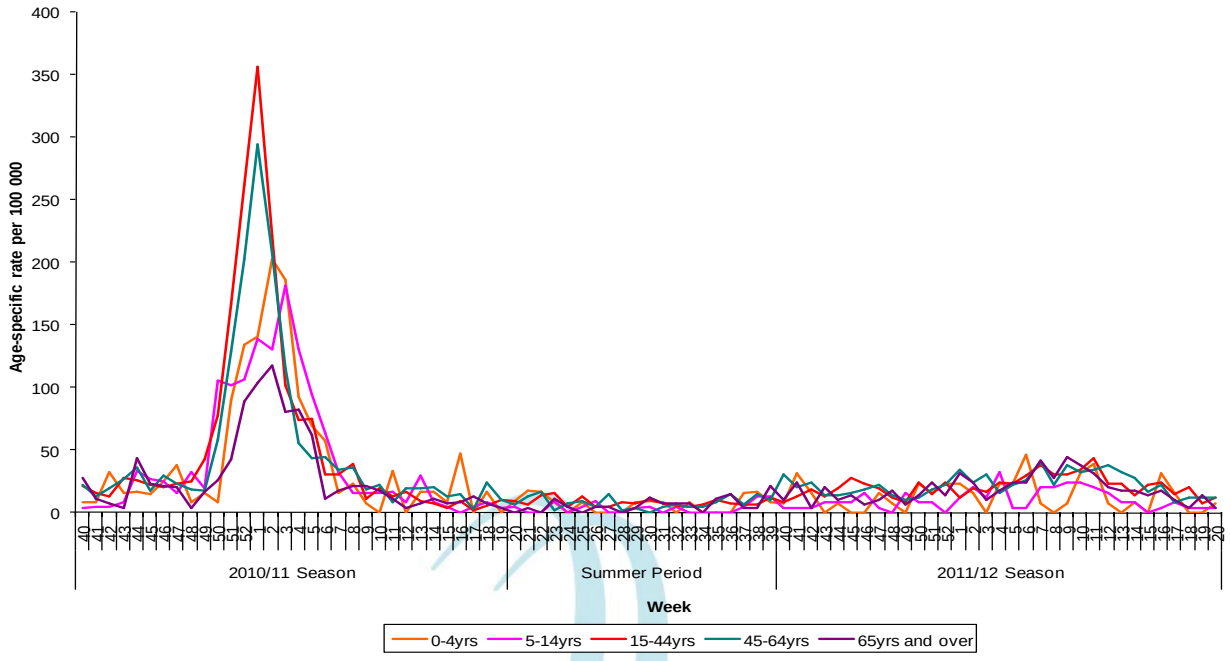
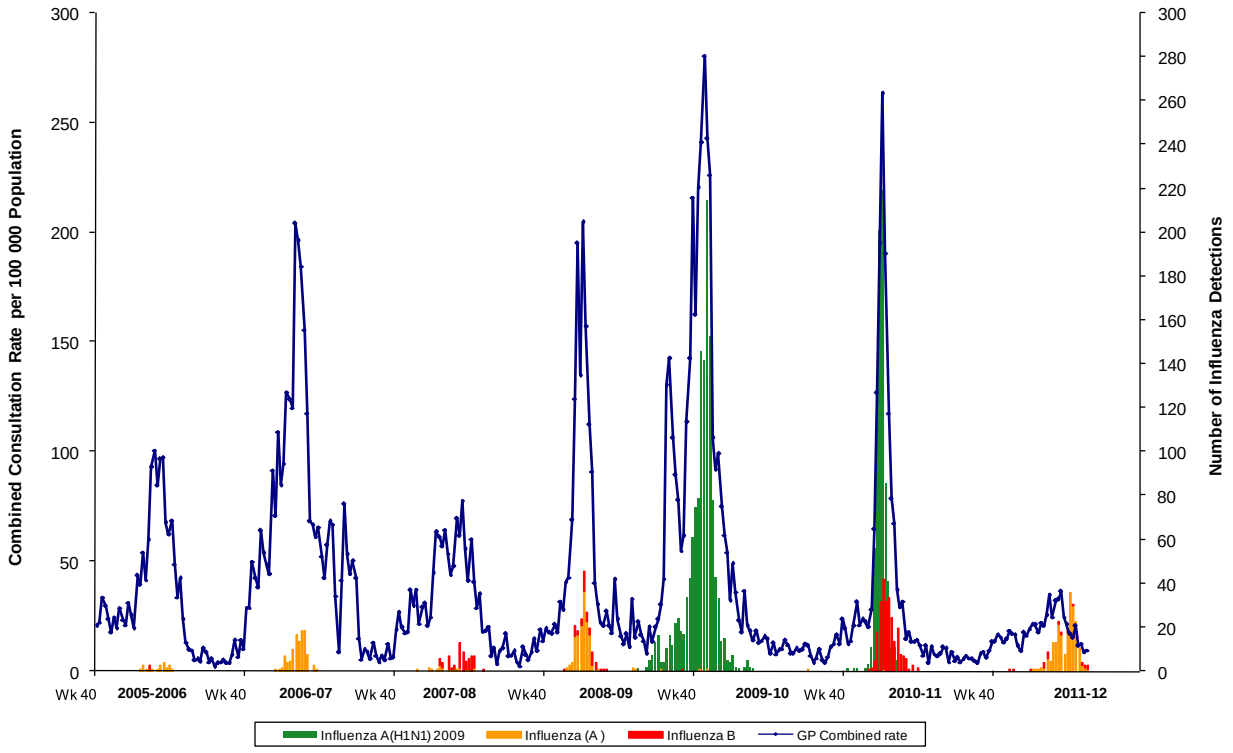


Figure 4. Sentinel GP combined consultation rate and number of influenza positive detections 2005/06 to present



Comment

Sentinel GP flu/FLI combined consultation rates and numbers of positive influenza detections by type from 2005/06 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

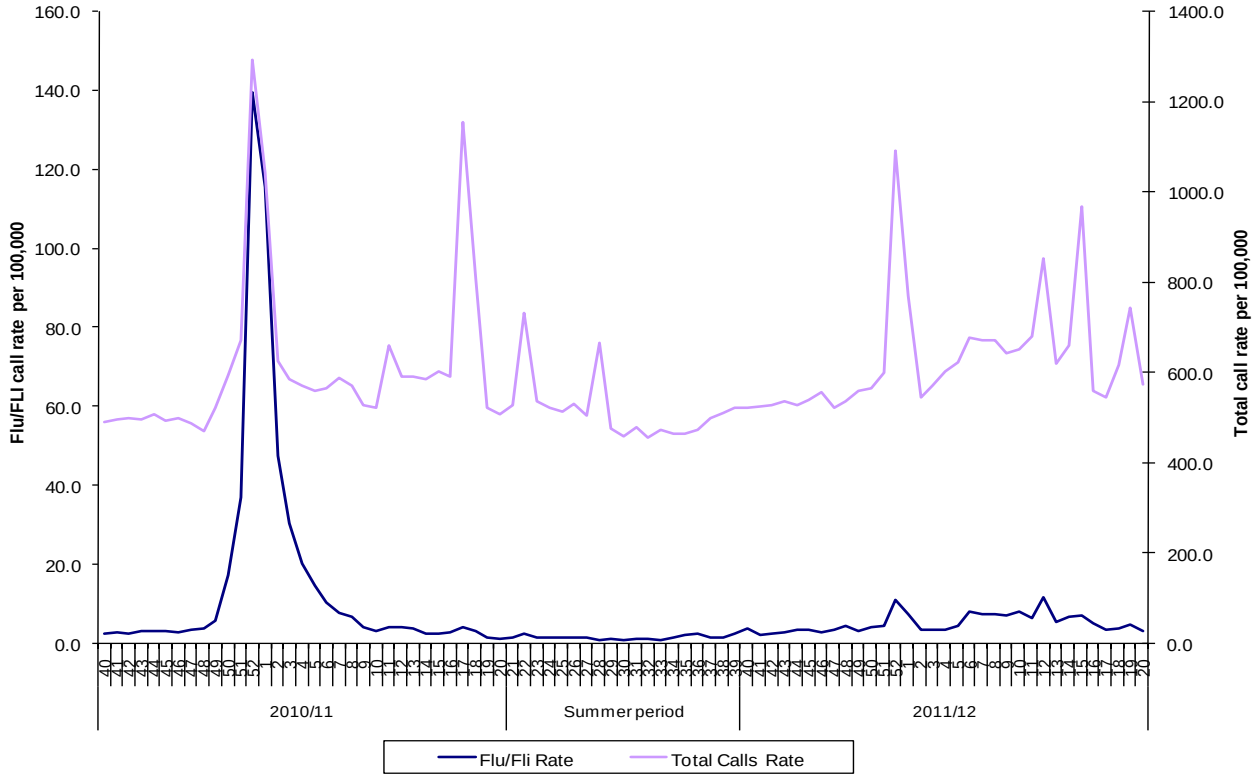
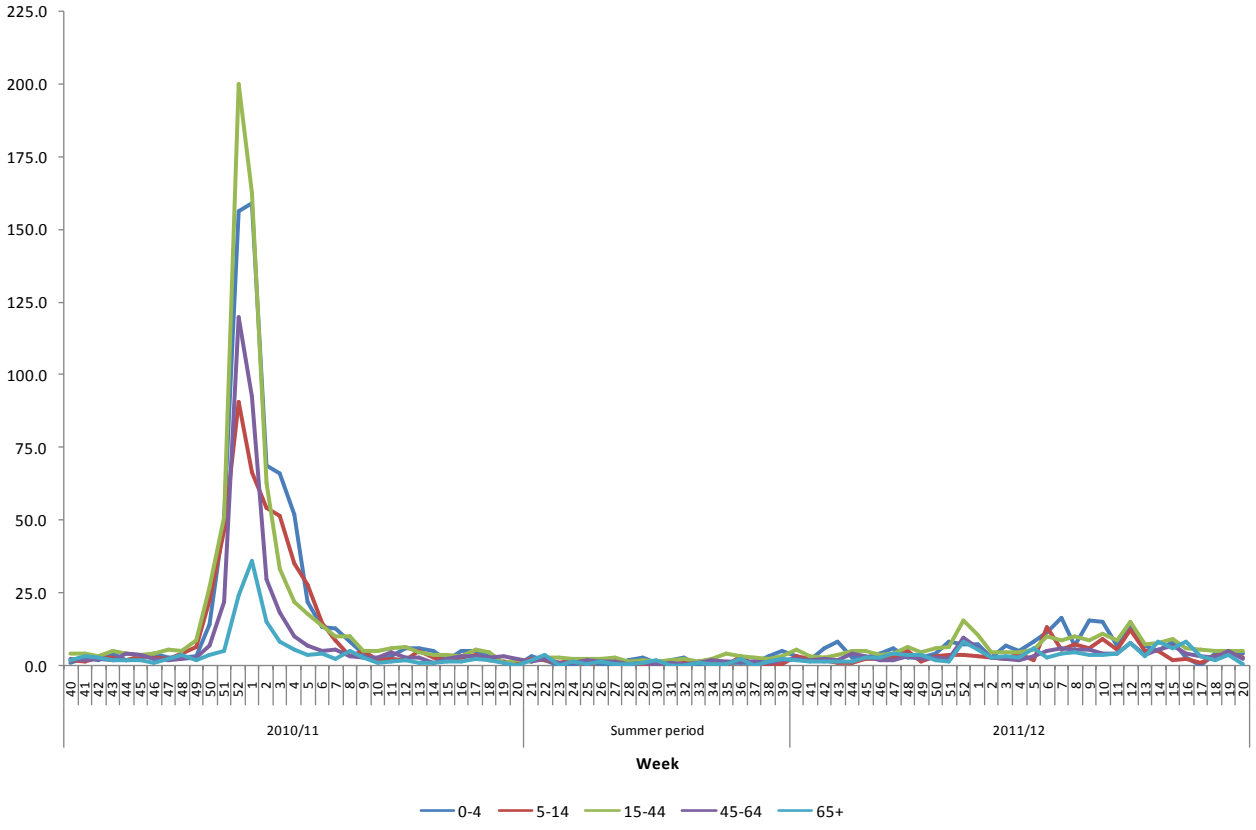


Figure 6. OOH Call rates of flu and flu-like illness by age-group from week 40 2010



Comment

Out-of-hours call rates for flu/FLI increased from 3.8 per 100,000 population in week 18 to 4.6 in week 19 due to the bank holiday period, and subsequently decreased to 3.3 per 100,000 population in week 20. Rates for both weeks 19 and 20 are higher than the same weeks last year (1.5 and 1.3 per 100,000 population, respectively). The highest age specific rates in both weeks 19 and 20 remain 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 Week 19 – 20 2012

Source	Specimens tested	AH3	A (untyped)	Influenza B	RSV	Total influenza positive	% Influenza positive
Sentinel	6	0	0	0	0	0	0%
Non-sentinel	156	2	1	3	10	6	4%
Total	**162**	**2**	**1**	**3**	**10**	6	**4%**

Table 2. Cumulative total Week 40 2011 – Week 20 2012

	AH3	A (untyped)	Flu B	Total influenza	RSV
0–4	57	1	4	**62**	674
5–14	17	0	3	**20**	20
15–64	46	6	7	**59**	28
65+	87	1	2	**90**	18
Unknown	0	0	0	**0**	0
All ages	**207**	**8**	**16**	**231**	**740**

Table 3. Cumulative total Week 40 2011 – Week 20 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	4	**60**	672
5–14	1	0	0	**1**	0	16	0	3	**19**	20
15-–64	5	1	1	**7**	2	41	5	6	**52**	26
65+	4	0	0	**4**	0	83	1	2	**86**	18
Unknown	0	0	0	**0**	0	0	0	0	**0**	0
All ages	**12**	**1**	**1**	**14**	**4**	**195**	**7**	**15**	**217**	**736**

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.

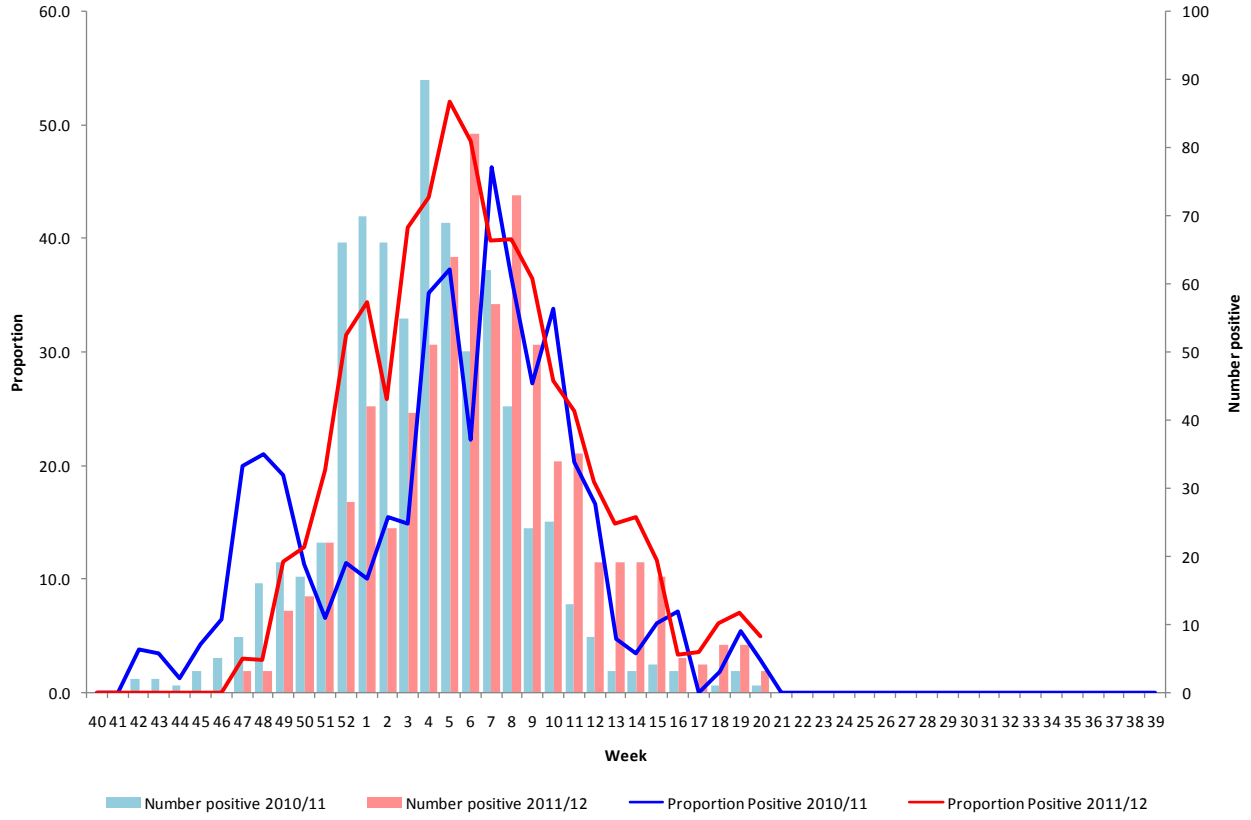
Cumulative reports of influenza A (untyped) may vary from week to week as these may be subsequently typed in later reports.

Comment

There were 162 specimens (6 sentinel and 156 non-sentinel) tested by the RVL during weeks 19 and 20, 2012. Two influenza A(H3), one influenza A (untyped) and three influenza B were reported from non-sentinel sources, with no positive detections reported from sentinel sources. This brings the total laboratory confirmed influenza detections this season to 231 (7%): 207 influenza A(H3), 8 influenza A(untyped) and 16 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 slightly from 6.1% (updated) in week 18 to 7.1% in week 19 but fell in week 20 to 4.9%. The proportion of positive RSVs for both weeks 19 and 20 remains higher than the same weeks last year (5.5% and 2.9%, respectively). However, small numbers will influence fluctuations in the proportions. The proportion of RSV positive specimens peaked at 52% in week 5 2012. Of 3510 non-sentinel specimens tested by the RVL this season to date, 21% (n=736) were positive for RSV with 91% of detections in the 0–4 year age group. In weeks 19 and 20 there were 10 detections compared with 11 (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 19 and 20. The total admitted to critical care with confirmed influenza so far this season is 11.

In the UK, since week 40 2011, there have been a total of 265 ICU/HDU influenza admissions across the UK reported through the USISS mandatory scheme with 25 (9.4%) resulting from influenza A(H1N1)pdm09, 84 (31.7%) from influenza A(H3N2), 138 from A (subtype not known) and 18 (6.8%) from influenza B.

Mortality surveillance

There were no reports of any laboratory confirmed influenza deaths in patients admitted to critical care in weeks 19 and 20. There has been one confirmed influenza death in patients admitted to critical care in Northern Ireland to date this season.

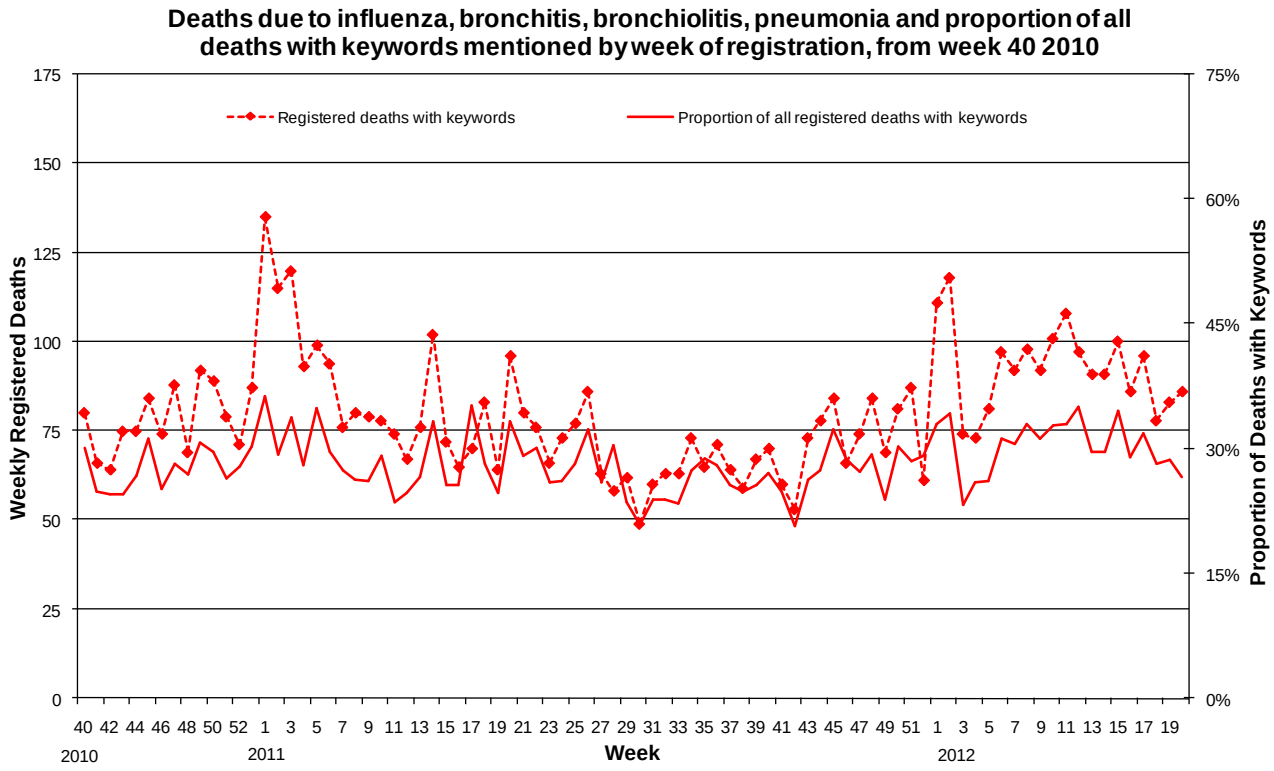
Outbreak surveillance

There were no confirmed influenza outbreaks in residential care units reported to the Public Health Agency during weeks 19 and 20. To date this season there have been 10 influenza A(H3) outbreaks reported to the PHA.

Mortality data

Weekly mortality data is provided from the 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 28% in week 18 to 29% in week 19 but decreased in week 20 to 27%. In weeks 19 and 20 there were 612 registered deaths of which 169 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 influenza season in Europe has been unusual. It started late, had no geographical progression, and has varied considerably in its impact from country to country.

The features this week are:

- All reporting countries but Slovakia reported low intensity.
- Of 64 sentinel specimens tested by 14 countries, 14.1% were positive for influenza virus. Of 7,280 influenza A viruses subtyped in sentinel practices since week 40/2011, 98.7% were A(H3) viruses and 1.3% were A(H1)pdm09 viruses. The lineage of 185 sentinel B viruses has been determined: 61.1% were B-Victoria lineage and 38.9% were B-Yamagata lineage.
- During week 19/2012, no case of SARI or severe influenza was reported.

The 2011–2012 season is coming to its end. The European weekly report will be replaced by a fortnightly report during the off-season period (weeks 21–39/2012).

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

USA

During week 19 (May 6–12, 2012), influenza activity declined nationally and in most regions, but remained elevated in some areas of the United States. One state reported widespread geographic activity; five states reported regional influenza activity; 11 states reported local activity; the District of Columbia, Guam, Puerto Rico, and 30 states reported sporadic activity, and the U.S. Virgin Islands and three states reported no influenza activity.

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; most indicators of influenza activity have declined compared to the previous week. Reports of localised influenza activity were still reported in regions in Ontario, Quebec, Newfoundland, New Brunswick and Nunavut. The FLI consultation rate declined considerably compared to the previous week and is below expected levels for this time of year.

http://www.phac-aspc.gc.ca/fluwatch/11-12/w19_12/index-eng.php

Worldwide (WHO)

As at 11 May 2012:

- The seasonal peak for influenza has passed in most countries in the temperate regions of the northern hemisphere.
- Different viruses have predominated in different parts of the world in the 2011–12 influenza season. In North America, Canada had a slight predominance of influenza B over influenza A(H3N2) (67% vs. 33% respectively) particularly later in the season, while in the USA, the proportions were reversed and A(H3N2) was more common. Mexico's season was almost all related to influenza A(H1N1)pdm09. In Europe, the large majority of influenza viruses have been influenza A(H3N2) with only very small numbers of A(H1N1)pdm09 and B. In Asia, northern China and Mongolia reported mostly influenza B early in the season with influenza A(H3N2) appearing later, though this sequence was reversed in the Republic of Korea and Japan where A(H3N2) was predominant initially and influenza B appeared later.
- At the beginning of the influenza season, most viruses tested were antigenically closely related to those found in the current trivalent seasonal vaccine. However, by mid-season, divergence was noted in both the USA and Europe in the A(H3N2) viruses tested and significant numbers of A(H3N2) viruses tested in recent months have shown reduced cross reactivity with the vaccine viruses. Influenza B virus detections have been both from the Victoria and Yamagata lineages with the former slightly more common in China and parts of Europe.
- Resistance to neuraminidase inhibitors has been low or undetectable throughout most of the season; however, a slight increase in levels of resistance to oseltamivir has been reported in influenza A(H1N1)pdm09 isolates in the USA. Most (11/16) of these oseltamivir resistant cases have been from the state of Texas, where influenza A(H1N1)pdm09 has been the most common virus circulating.

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