

Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 16 (15 – 21 April 2013)

Summary

- GP consultation rates remain below the Northern Ireland threshold of 70 per 100,000 population. However, there are still significant specimen numbers testing positive for influenza and outbreaks continue to be reported.
- GP consultation rates decreased from 41.6 per 100,000 population in week 15 to 25.6 per 100,000 population in week 16, 2013 (38% decrease).
- OOH consultation rates for 'flu/FLI decreased from 6.5 per 100,000 population in week 15 to 4.7 per 100,000 population in week 16, 2013 (28% decrease).
- Influenza positivity rate of respiratory specimens and numbers submitted for testing appear to be decreasing. In week 16, 2013 there were 20 positive detections of influenza A(H3), 2 influenza A(untyped), and 2 influenza B. Influenza A remains the predominant type during week 16 and also for the season overall.
- RSV activity remains very low.
- There were four new admissions to ICU confirmed with influenza reported in week 16, 2013. The total admitted to ICU that have been confirmed with influenza this season is now 54.
- There were no deaths in ICU patients with laboratory confirmed influenza reported in week 16, 2013.
- There were two new confirmed influenza outbreaks reported to PHA in week 16, 2013 with the total being 30 this season.

Introduction

In order to monitor influenza activity in Northern Ireland a number of surveillance systems are in place.

Additional surveillance systems are:

- GP sentinel surveillance representing 11.7% of Northern Ireland population;
- GP Out-of-Hours surveillance system representing the entire population;
- Virological reports from the Regional Virus Laboratory (RVL);
- Mortality data from Northern Ireland Statistics and Research Agency (NISRA);
- Critical Care Network for Northern Ireland reports on critical care patients with confirmed influenza.

Sentinel GP Consultation Data

Figure 1. Sentinel GP consultation rates for combined flu and flu-like illness 2010/11 - 2012/13

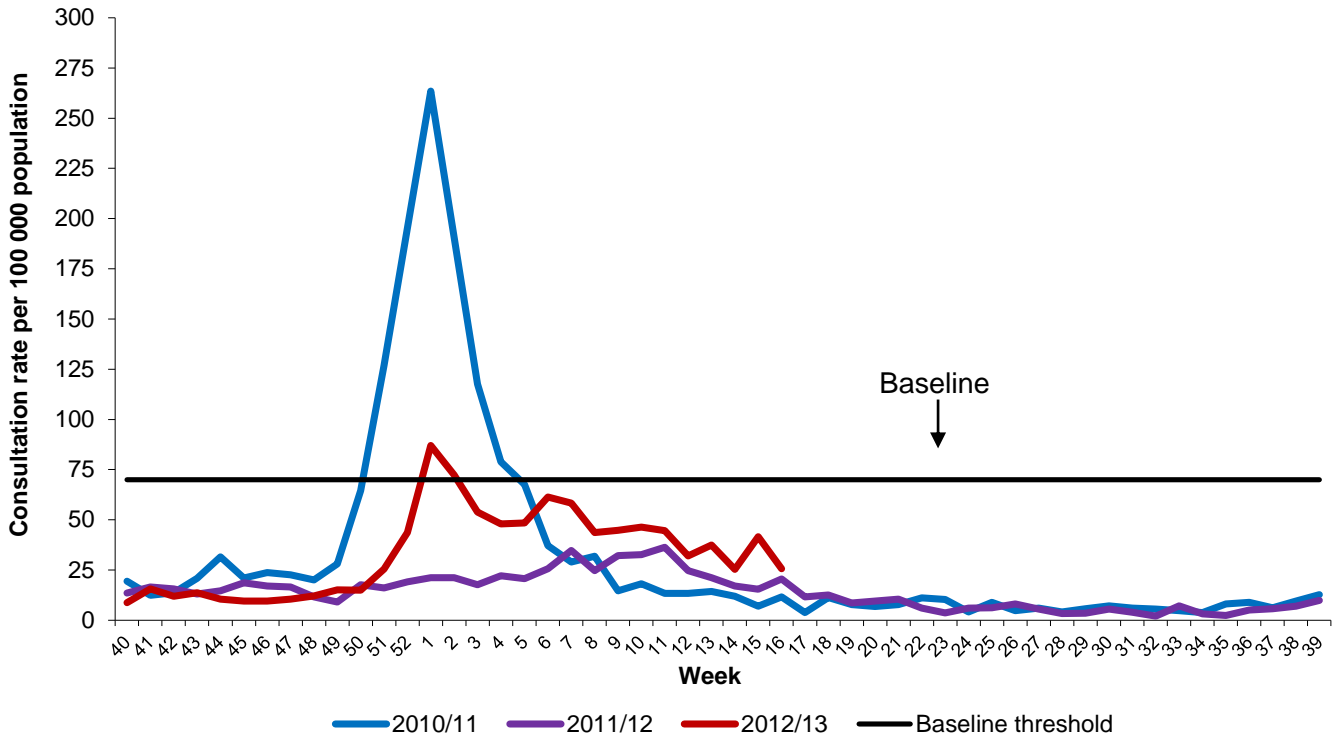


Figure 2. Sentinel GP combined consultation rates and number of influenza positive detections 2007/08 – 2012/13.

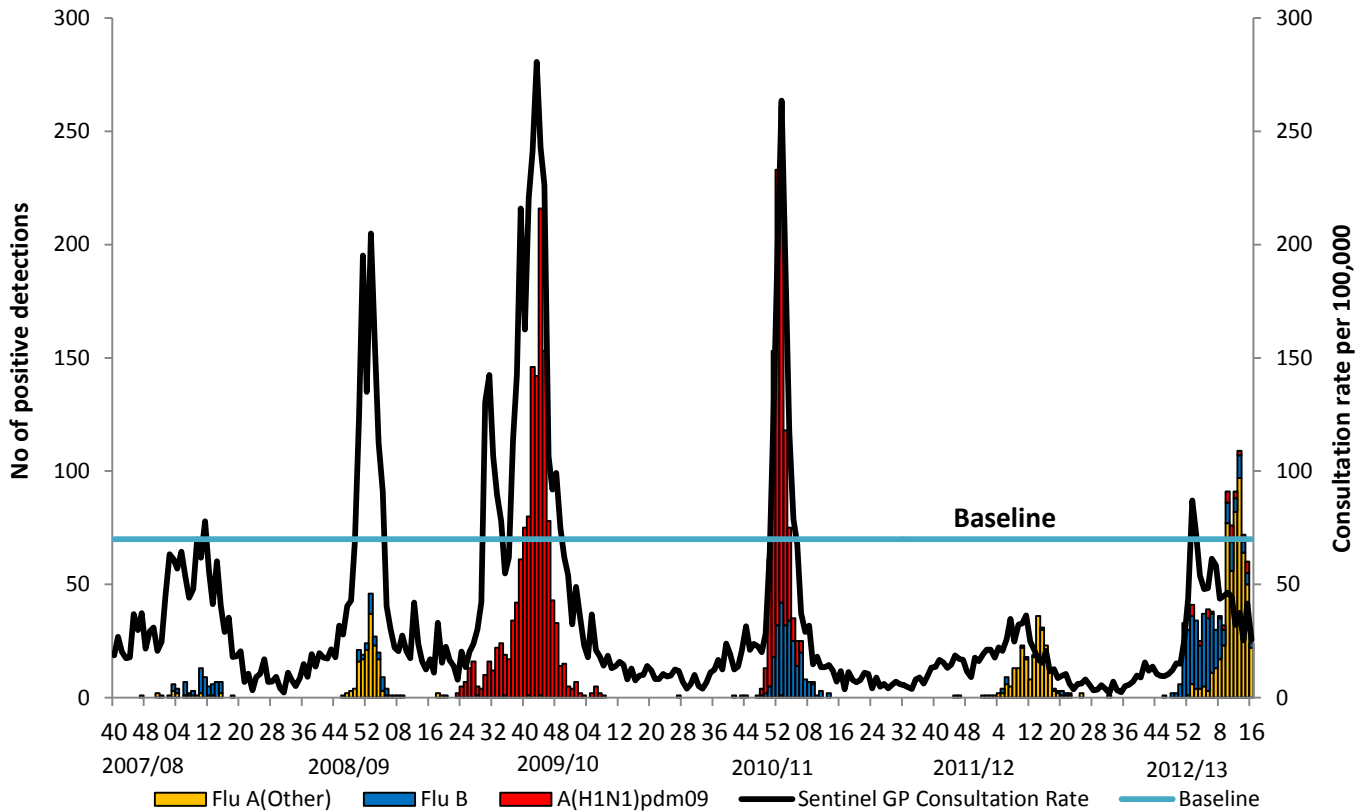
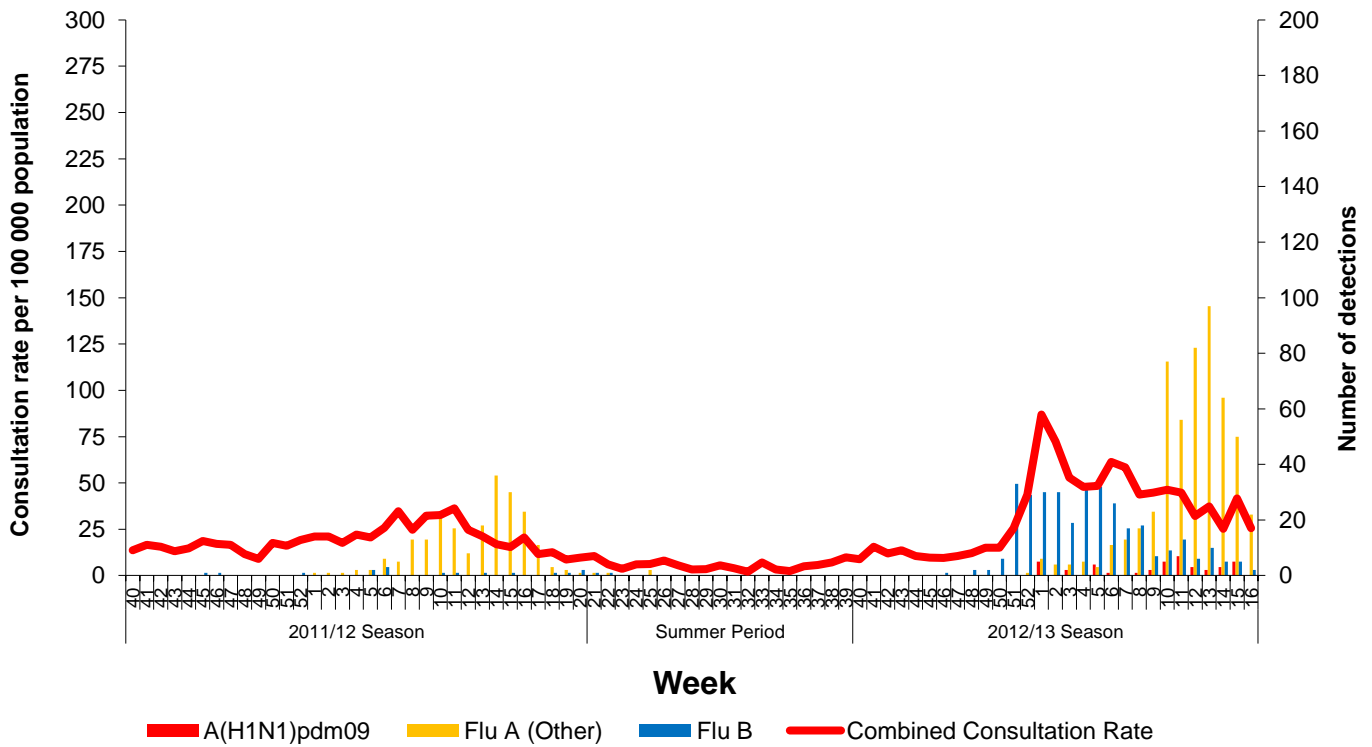


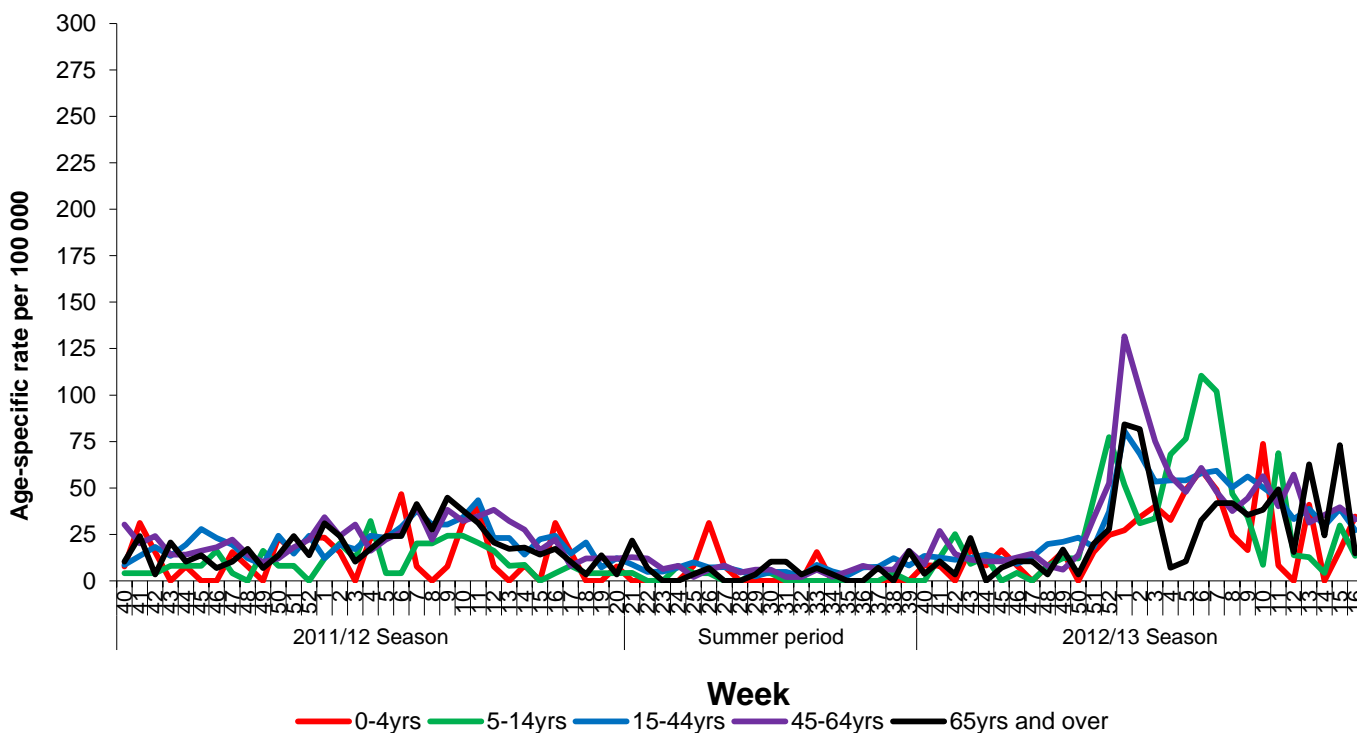
Figure 3. Sentinel GP consultation rates for combined flu and flu-like illness and number of virology 'flu detections from week 40, 2011



Comment

GP consultation rates decreased from 41.6 per 100,000 population in week 15 to 25.6 per 100,000 population in week 16 (38% decrease). Rates remain below the Northern Ireland threshold of 70 per 100,000 population but remain slightly higher than the same period in the previous two influenza seasons. Flu/FLI consultation rates have been falling, albeit erratically, since week 6. The period when influenza has been circulating this season is extended in comparison to the previous two seasons (Figures 1, 2 and 3).

Figure 4. Sentinel GP age-specific consultation rates for combined flu and flu-like illness from week 40, 2011



Comment

All of the age-specific consultation rates also decreased in week 16 with the exception of the 0 - 4 year age group although this result should be interpreted with caution due to the small numbers in this age group. The 0-4 year age group now displays the highest age-specific consultation rate in week 16, 2013. The consultation rate in the over 65 year age group has decreased substantially, which would be in line with the reduction in the numbers of outbreaks that have been reported and are currently on-going over the past two weeks. Small numbers in some of the age groups can contribute to fluctuations in consultation rates. (Figure 4).

Out-of-Hours (OOH) Centres Call Data

Figure 5. OOH call rate for flu and flu-like illness, 2010/11 – 2012/13

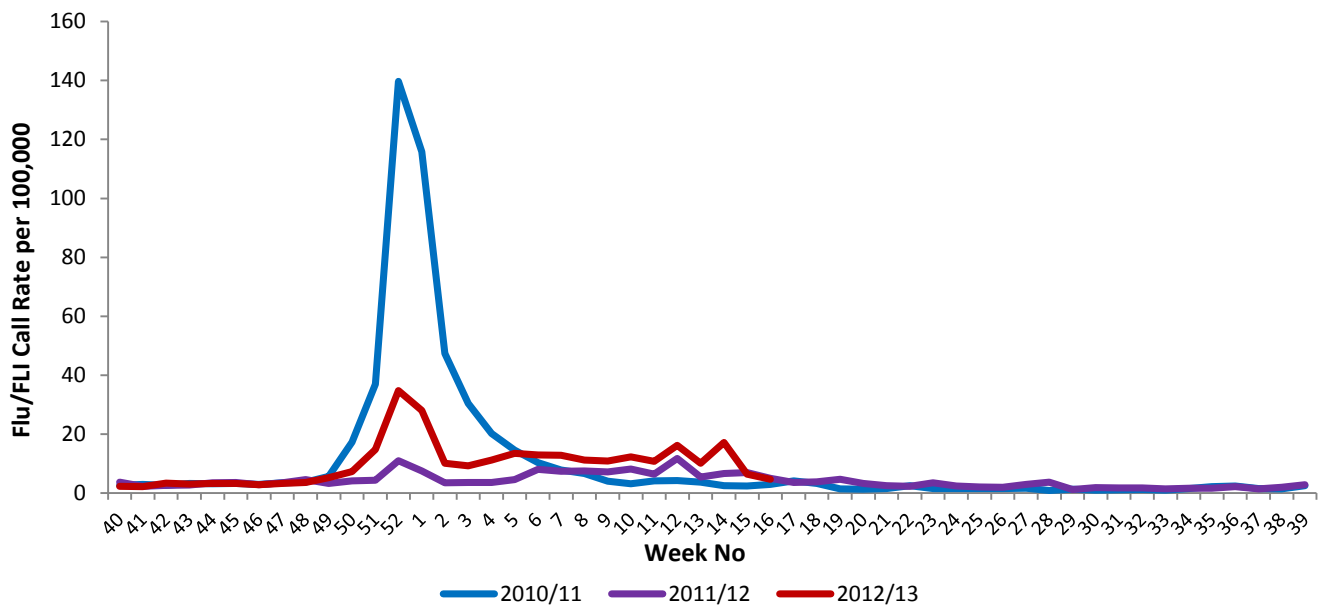
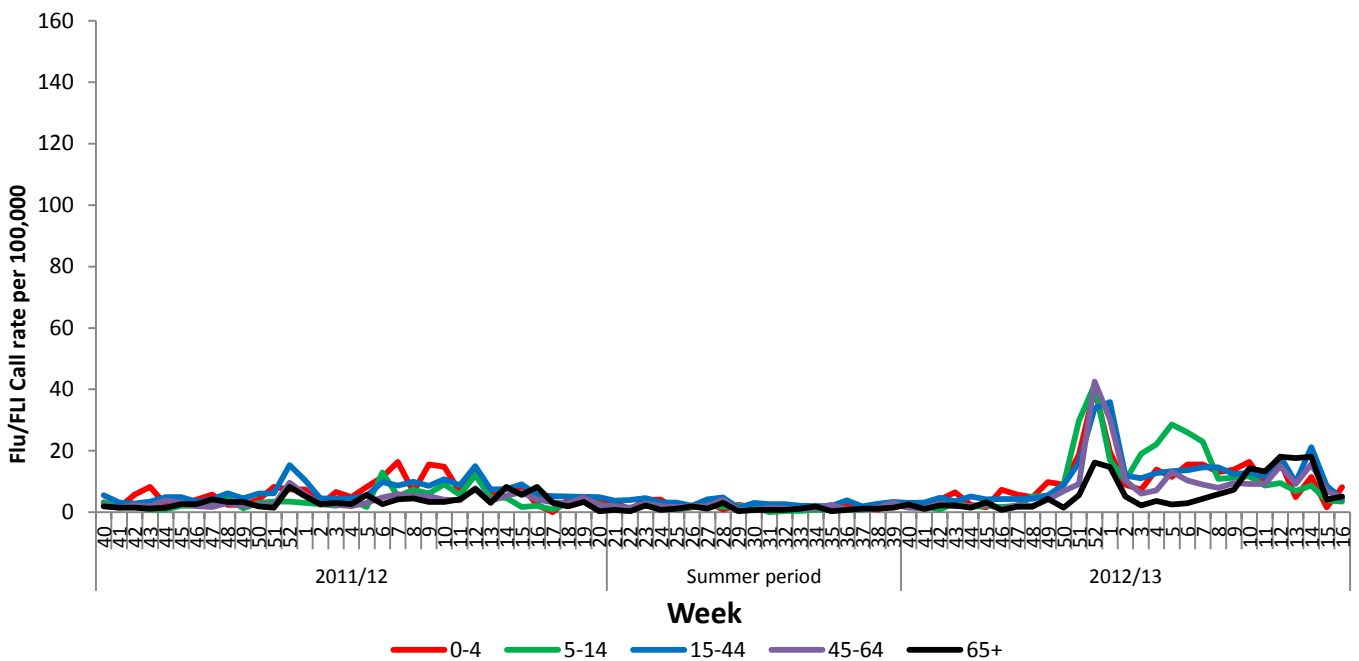


Figure 6. OOH Call rates of flu and flu-like illness by age-group from week 40, 2011



Comment

The OOH consultation rate for ‘flu/FLI decreased from 6.5 per 100,000 population in week 15 to 4.7 per 100,000 population in week 16, 2013 (38% decrease) with the rate similar to the same period in both 2011/12 and 2010/11, and is approaching inter-seasonal levels. The age-specific consultation rates for the 5-14, 15-44 and 45-64 year age groups all decreased compared to the previous week; however, there were increases in both the rates for the 0-4 and over 65 year age groups. The highest age-specific rate was in the 0-4 year age group in week 16, 2013. Small numbers in some of the age groups can contribute to fluctuations in rates (Figures 4 and 5).

Virology Data

Table 1. Virus activity in Northern Ireland Week 16, 2013

Source	Specimens Tested	AH3	A(H1N1) pdm09	A (untyped)	Influenza B	RSV	Total influenza Positive	% Influenza Positive
Sentinel	0	0	0	0	0	0	0	0
Non-sentinel	97	20	0	2	2	0	24	25%
Total	97	20	0	2	2	0	24	25%

Table 2. Cumulative Total Week 40, 2012 - Week 16, 2013

	AH3	A(H1N1) pdm09	A (untyped)	Flu B	Total Influenza	RSV
0-4	39	13	1	65	118	679
5-14	8	1	0	81	90	21
15-64	155	20	9	136	320	61
65+	311	6	13	52	382	67
Unknown	1	0	0	0	1	5
All ages	514	40	22	334	911	833

Table 3. Cumulative Total Week 40, 2012 - Week 16, 2013

	Sentinel						Non-sentinel					
	AH3	A(H1N1) pdm09	A (untyped)	Flu B	Total Influenza	RSV	AH3	A(H1N1) pdm09	A (untyped)	Flu B	Total Influenza	RSV
0-4	0	0	0	2	2	3	39	13	1	63	116	676
5-14	1	0	0	13	14	0	7	1	0	68	76	21
15-64	20	3	0	53	76	5	135	17	9	83	244	56
65+	16	1	0	2	19	1	295	5	13	50	363	66
Unknown	0	0	0	0	0	0	1	0	0	0	1	5
All ages	37	4	0	70	111	9	477	36	22	264	800	824

Note

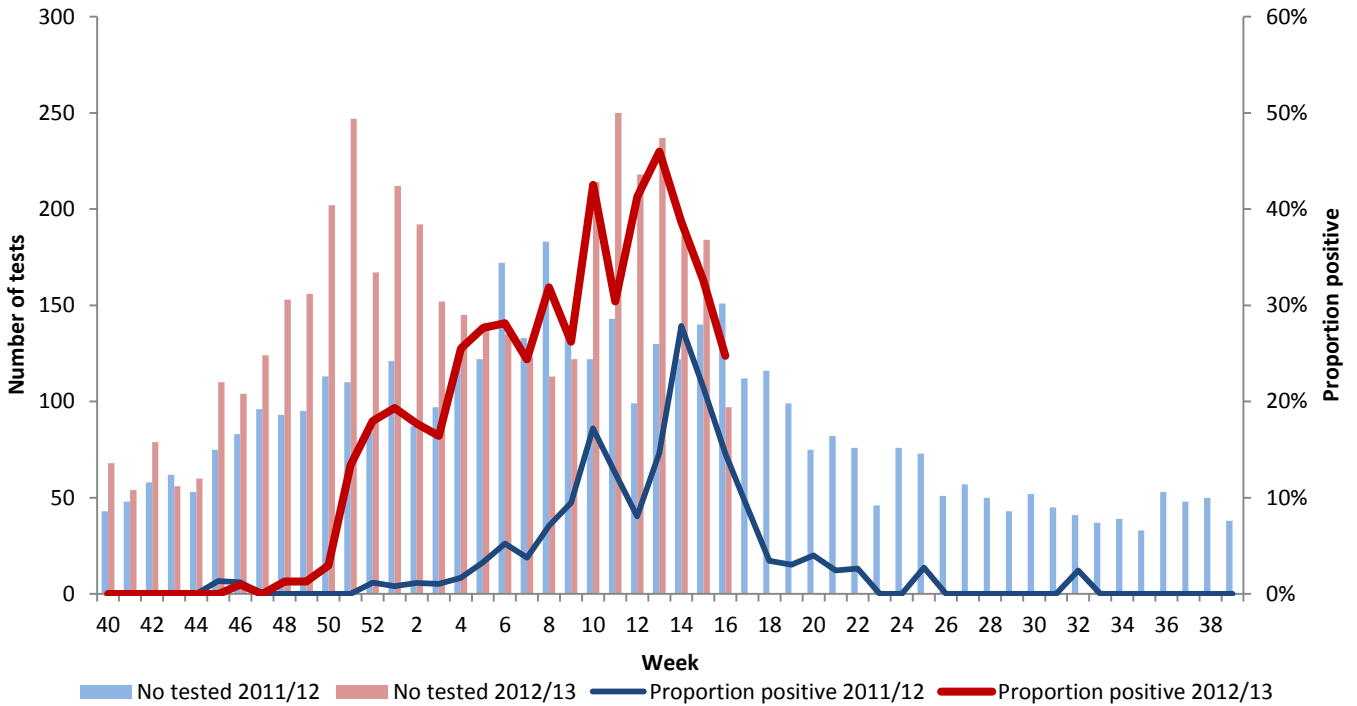
All virology data is provisional. The virology figures for previous weeks included in this or future bulletins are updated with data from laboratory returns received after the production of the last bulletin. The current bulletin reflects the most up-to-date information available.

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

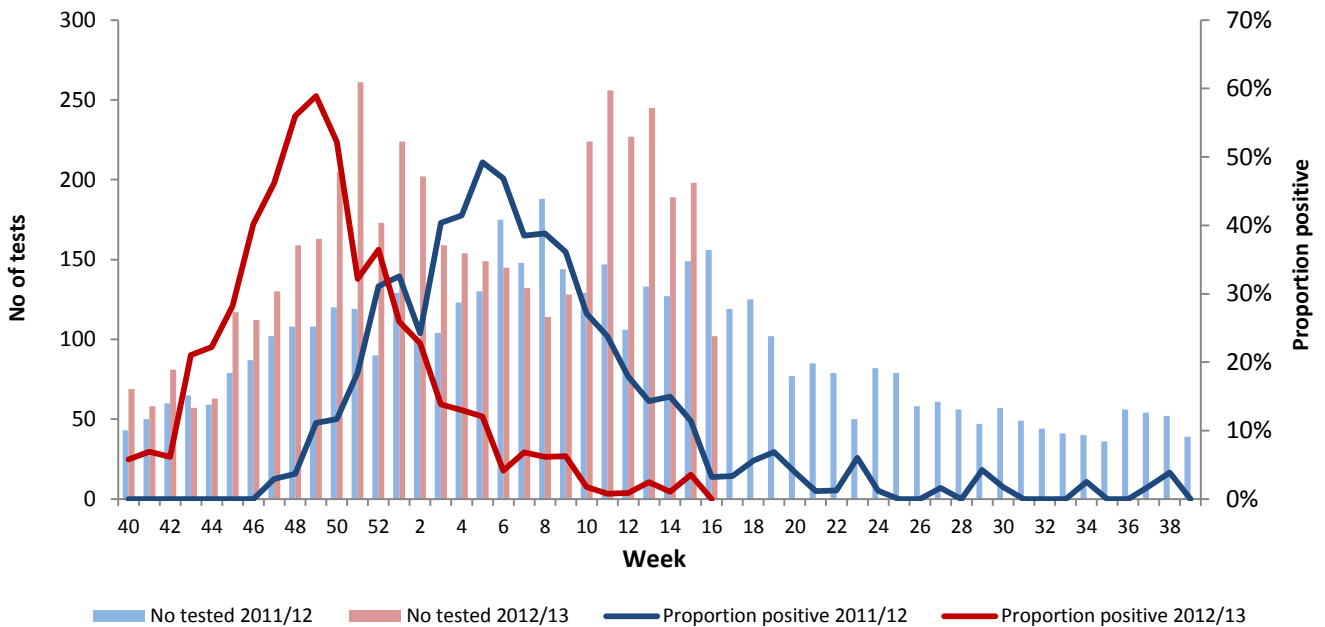
There are still significant numbers of specimens being submitted for testing despite other influenza activity indicators being at low levels. However, both numbers tested and positivity rates are showing signs of a decrease over the past few weeks. There were 97 specimens submitted for testing in week 16, 2013, of which there were 20 positive detections of influenza A(H3), 2 influenza A(untyped), and 2 influenza B. Influenza A remains the predominant type for both week 16, 2013 and for the season as a whole (63% of all influenza detections). To date this season there have been 576 detections of influenza A (514 influenza A(H3), 40 A(H1N1)pdm09, and 22 A(untyped)) and a further 334 influenza B (Figure 7).

Figure 7. Number of samples tested for influenza and proportion positive, 2011/12 and 2012/13, all sources



Respiratory Syncytial Virus

Figure 8. Number of samples tested for RSV and proportion positive, 2011/12 and 2012/13, all sources



Comment

There were no RSV detections in week 16, 2013 with positivity rates remaining very low. From week 40 of the current season there have been a total of 833 RSV positive detections reported, of which 82% fall in the 0-4 year age group. (Figure 8).

Hospital Surveillance

Similar to last year data will be collected on numbers of laboratory confirmed influenza patients and laboratory confirmed influenza deaths in critical care (level 2 and level 3) in Northern Ireland for this season.

There were four new admissions to ICU confirmed with influenza reported in week 16, 2013. To date there have been 54 cases (41 adults, 13 children) admitted to ICU that have been confirmed with influenza; 27 of which were confirmed with influenza A(H3), 21 with influenza B, 3 influenza A(H1N1)pdm09 and 3 influenza A(untyped).

Table 4. 2012/13 ICU cases with confirmed influenza by age group and influenza type

Age Group	Influenza A	Influenza B	Total
0-14	4	8	12
15-44	5	3	8
45-64	11	5	16
65+	13	5	18
All age groups	33	21	54

Mortality Surveillance

There were no deaths in ICU patients with laboratory confirmed influenza reported in week 16, 2013; with the total this season remaining at seven. All those who died had existing co-morbidities.

Outbreak Surveillance

There were two confirmed influenza outbreaks reported in week 16, 2013, both in residential/nursing homes. The total number of confirmed influenza outbreaks reported so far this season is 30 compared to a total of ten outbreaks for the 2011/12 season. Of the 30 outbreaks 27 were confirmed for influenza A only, 2 influenza B only and 1 confirmed with both influenza A and influenza B.

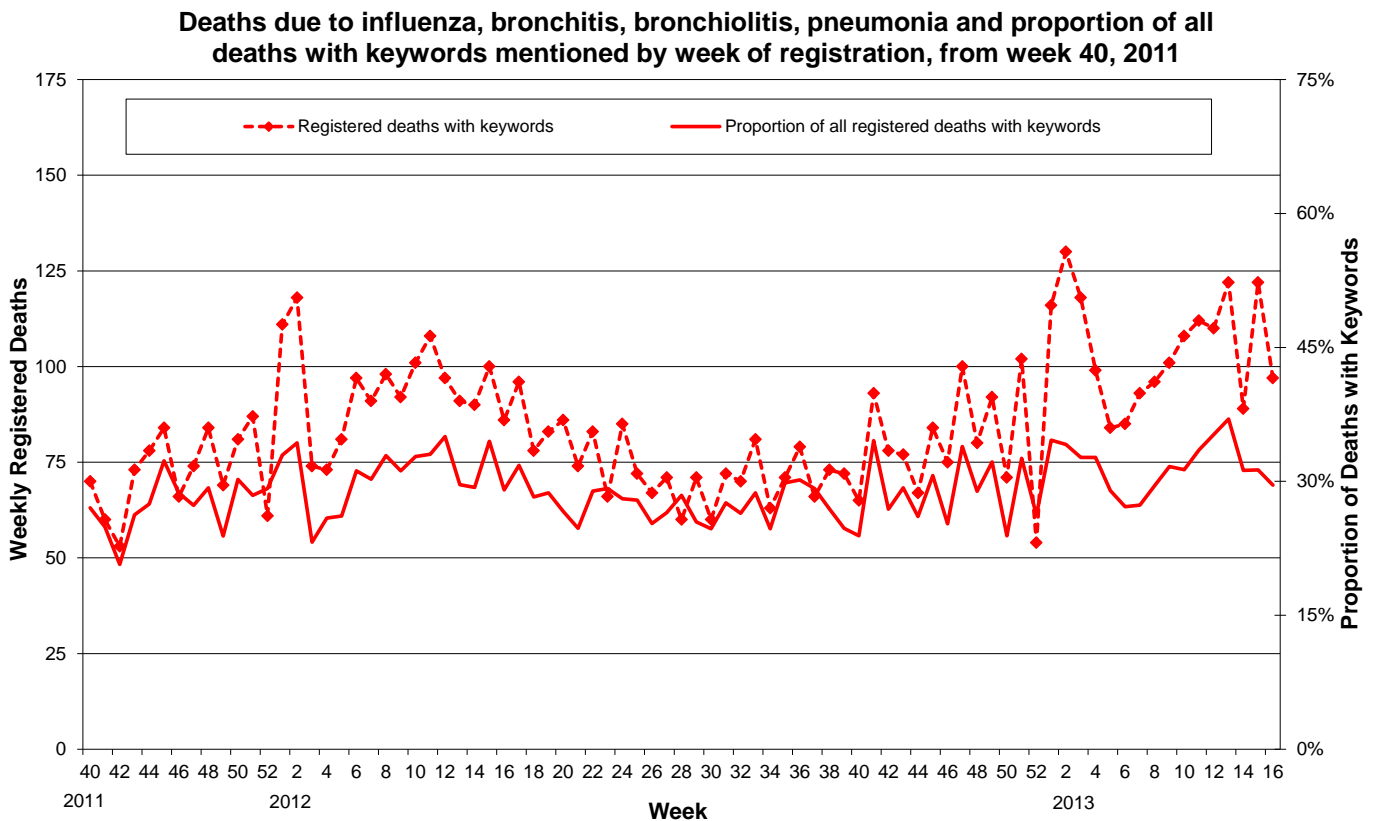
The continuing outbreak activity has also led to an increase in numbers of specimens submitted for testing and influenza positivity rates.

This appears to be a similar pattern to the previous season where all the confirmed influenza outbreaks that were reported occurred at the end of the influenza season in April 2012 despite the relatively low consultation rates in both the sentinel GP practices and OOH.

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 9. Weekly registered deaths



Comments:

The proportion of deaths related to respiratory keywords decreased slightly from 31% in week 15, 2013 to 30% in week 16, 2013. The number of registered deaths due to respiratory keywords also decreased. In week 16, 2013 there were 328 registered deaths of which 97 related to these specific respiratory infections.

Vaccine Uptake

As at the end of March 2013, the proportion of people in Northern Ireland aged 65 years and over who had received the seasonal influenza vaccine was 75.0%, while the uptake in those aged under 65 in an at-risk group was 80.2% (provisional data). This compares with 77.0% uptake in the over 65 years, and 81.7% in the under 65 at-risk group for the same period last year. This excludes those who may have received the seasonal influenza vaccine as part of a workplace occupational health programme.

International Summary

Europe

Weekly reporting on influenza surveillance in Europe for the 2012–13 season started in week 40/2012 and will finish after week 20/2013. Active influenza transmission began around week 49/2012 with ILI/ARI rates peaking in almost all countries between weeks 52/2012 and 8/2013.

- Twenty-five of 28 reporting countries indicated low-intensity transmission.
- Decreasing or stable trends were reported by all reporting countries.
- The proportion of influenza-positive sentinel specimens (34%) has continued to decrease since the peak observed in week 5/2013 (61%), in line with the lower numbers of specimens being tested.
- Since week 40/2012, 47% of sentinel surveillance specimens testing positive for influenza virus have been type A and 53% type B. Of the influenza A viruses subtyped, the proportion of A(H1N1)pdm09 viruses was 64%.
- Forty-four hospitalised, laboratory-confirmed influenza cases were reported by three countries.
- In all reporting countries, influenza activity continued to decline or had already returned to baseline levels. After more than three months of active transmission, a long period compared to other years, the 2012–13 influenza season is waning and moving towards its end.

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

Worldwide (WHO)

As of 12 April, 2013:

- Influenza activity in North America appears to have declined during the last week of March since peaking in early January in Canada and the United States of America and approximately two weeks later in Mexico. Proportionally influenza B increased although influenza A(H3N2) was the most commonly detected virus in North America overall for this season.
- Influenza activity continued to decline in Europe in general except in most parts of Eastern Europe where elevated levels of activity remained. The proportion of subtypes of viruses circulating was not uniform across the continent and has changed through the season. Influenza B mainly reported in western and northern countries and influenza A in eastern and central Europe. So far this season, excess mortality in most countries has been moderate and most deaths occurred among people aged 65 and older with no excess mortality in younger age groups.
- Influenza activity throughout the temperate region of Asia decreased overall with the exception of China and the Republic of Korea, which have reported sustained activity.

- Low levels of influenza activity continued to be reported across the tropical regions of the world and activity in countries of the southern hemisphere remained at inter-seasonal levels.
- Since the start of the season a few viruses with reduced susceptibility to neuraminidase inhibitors have been detected in the countries performing antiviral resistance testing. The majority of characterized influenza viruses were antigenically similar to the 2012-13 northern hemisphere vaccine viruses.

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

In China, as of April 23, 2013, 108 cases of influenza A(H7N9) have been identified, of which 22 have died: http://www.who.int/influenza/human_animal_interface/influenza_h7n9/en/index.html

For more information on specific areas see the links below:

USA

<http://www.cdc.gov/flu/weekly/summary.htm>

Canada

<http://www.phac-aspc.gc.ca/fluwatch/>

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/>

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 Paul Cabrey, Dr. Naomh Gallagher and Dr. Brian Smyth.