

Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 14 (1 – 7 April 2013)

Summary

- GP consultation rates remain below the Northern Ireland threshold of 70 per 100,000 population.
- GP consultation rates decreased from 37.4 per 100,000 population in week 13 to 25.3 per 100,000 population in week 14 (32% decrease). This decrease is likely due to the 2 day bank holiday period when GP practices were closed.
- OOH consultation rates for 'flu/FLI increased from 10.1 per 100,000 population in week 13 to 17.2 per 100,000 population in week 14, 2013. Again this increase is likely due to the bank holiday period.
- Influenza positivity rate of respiratory specimens remains high. In week 14, 2013 there were 27 positive detections of influenza A (H3), 15 influenza A (untyped), 3 influenza B and 1 influenza A(H1N1)pdm09. Influenza A remains the predominant type during week 14 and also for the season overall.
- RSV activity remains very low.
- There were six new admissions to ICU confirmed with influenza reported in week 14, 2013. The total admitted to ICU that have been confirmed with influenza this season is now 46.
- There was one death in an ICU patient with laboratory confirmed influenza reported in week 14, 2013.
- There were no new confirmed influenza outbreaks reported to PHA in week 14, 2013 with the total being 27 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

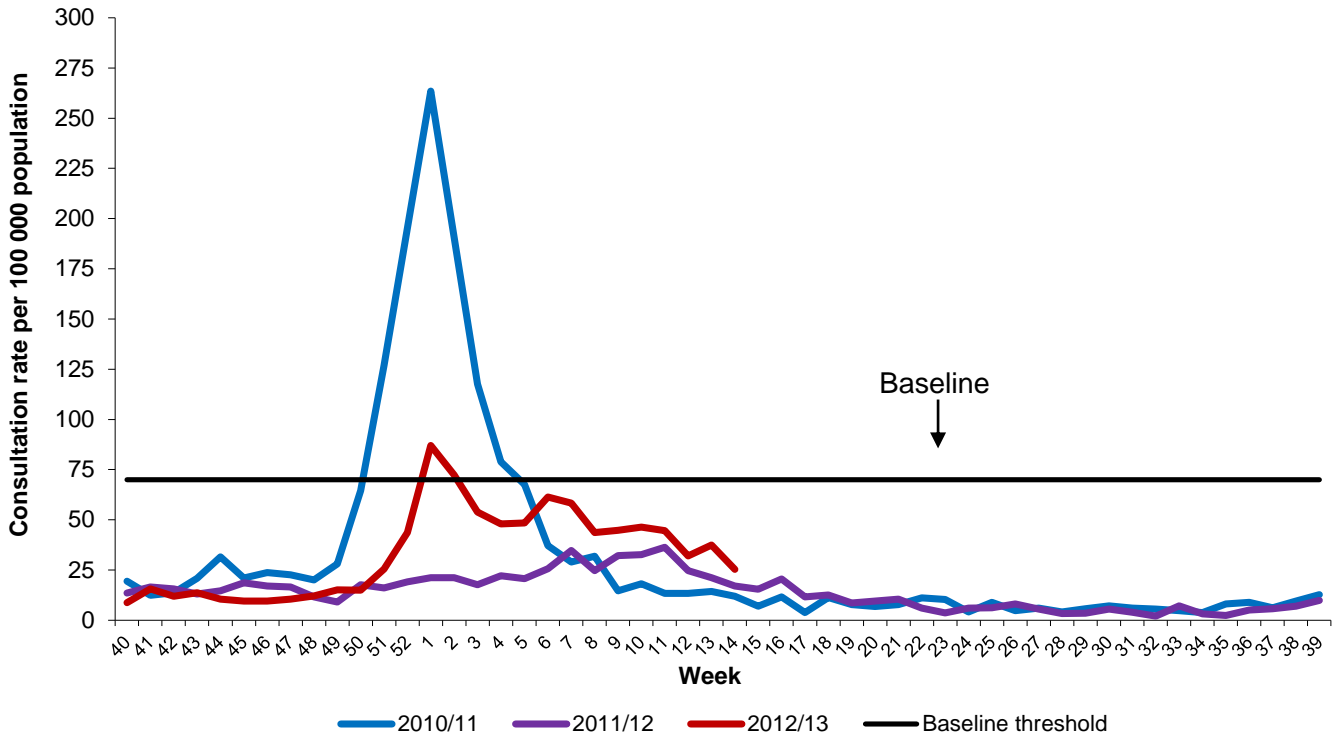


Figure 2. Sentinel GP combined consultation rates and number of influenza positive detections 2007/08 – 2012/13.

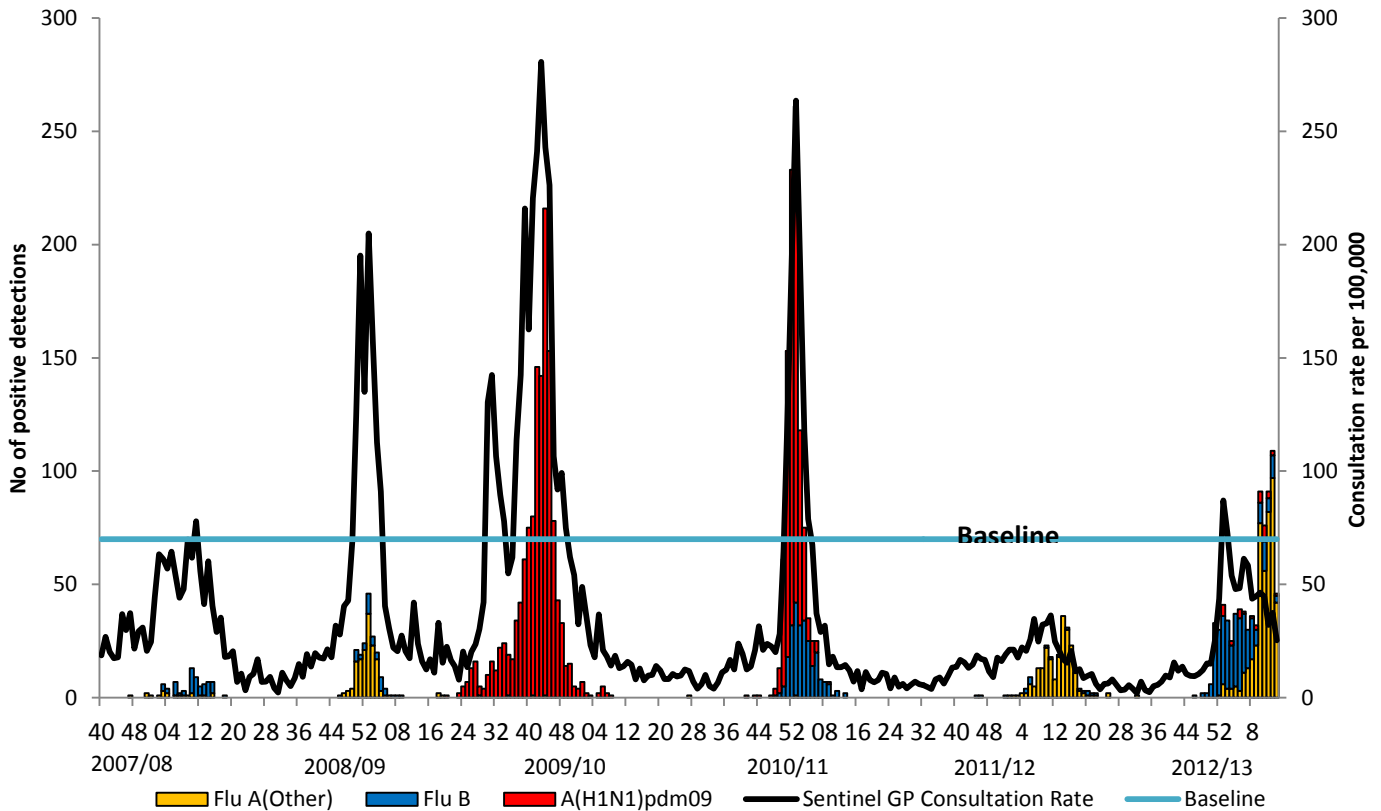
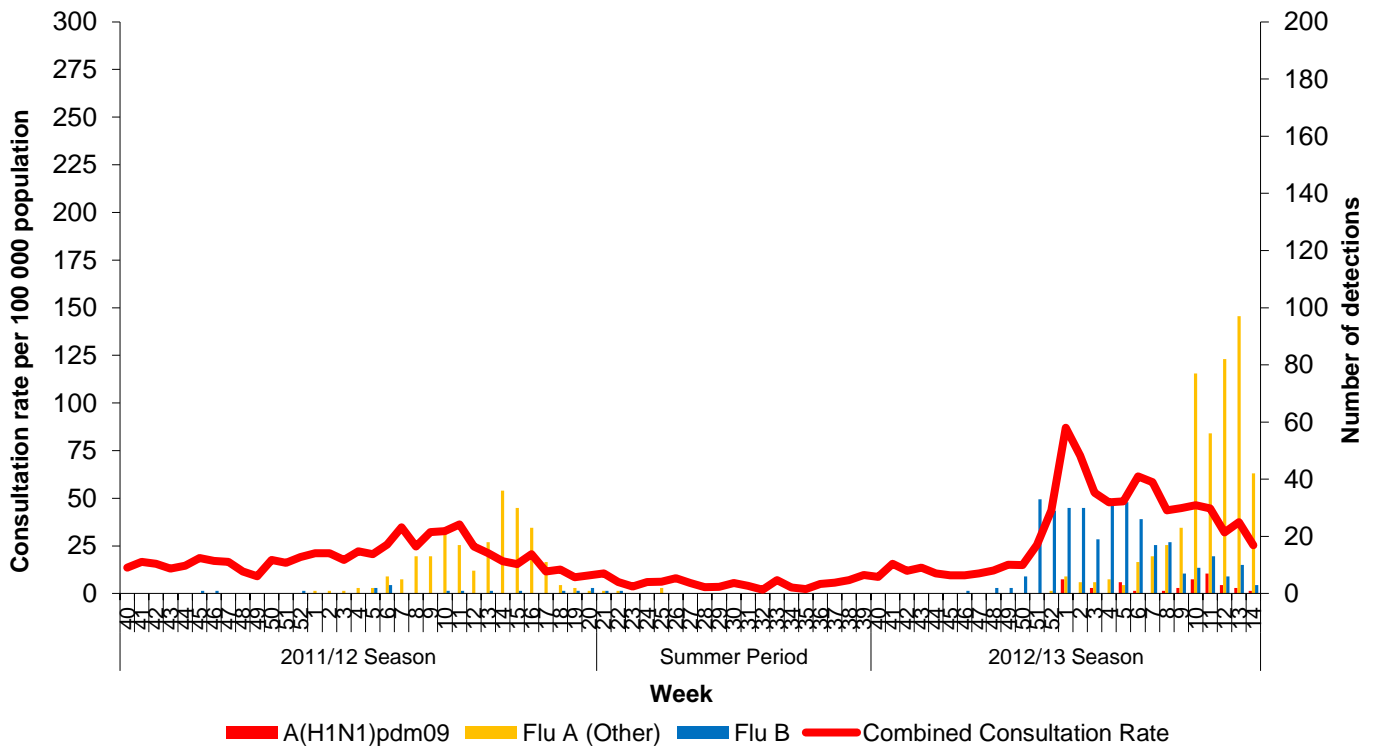


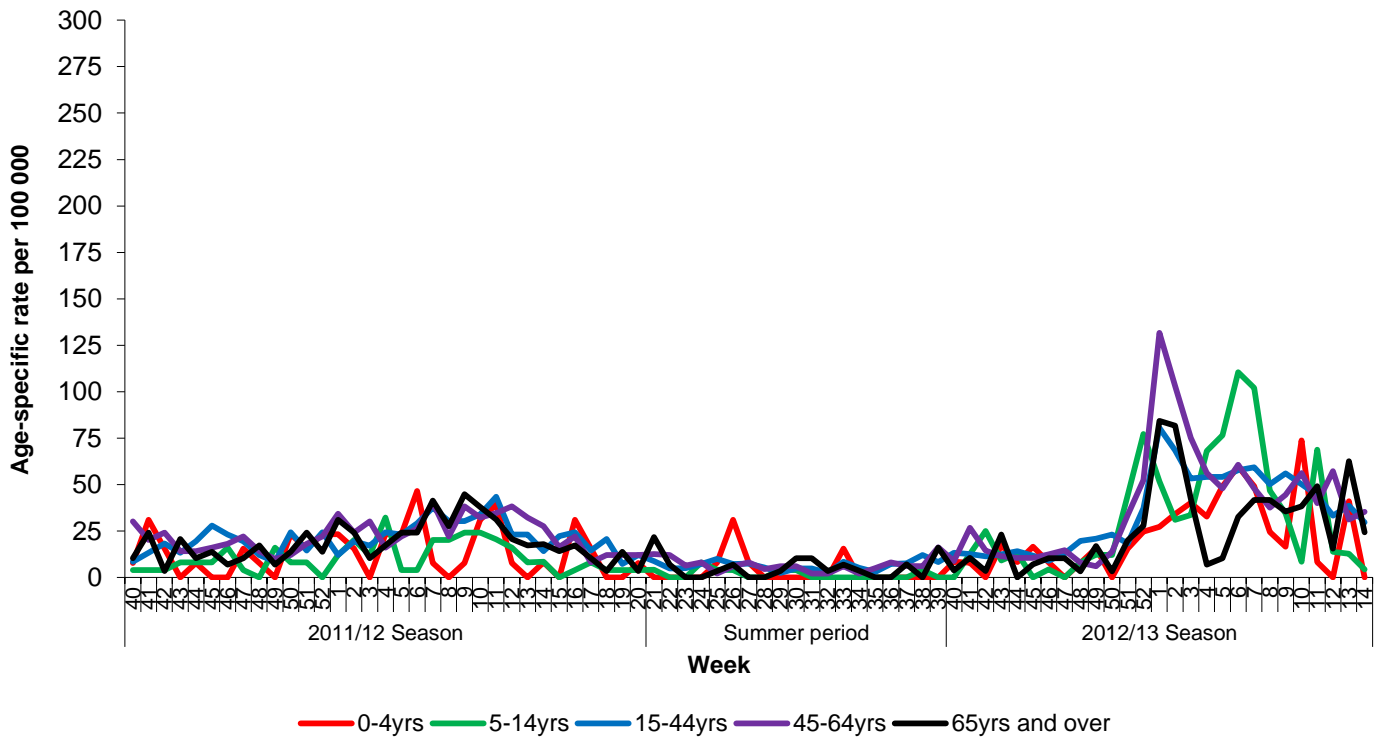
Figure 3. Sentinel GP consultation rates for combined flu and flu-like illness and number of virology 'flu detections from week 40, 2011



Comment

GP consultation rates decreased from 37.4 per 100,000 population in week 13 to 25.3 per 100,000 population in week 14 (32% decrease); however, this decrease would be expected due to the 2 day bank holiday period in week 14 when GP practices were closed. Rates remain below the Northern Ireland threshold of 70 per 100,000 population but are higher than the same period in the previous two influenza 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 14 with the exception of the 45-64 year age group which increased slightly and also now displays the highest age-specific rate. The over 65 year age group displayed a large decrease which may be due in part to the decrease in numbers of outbreaks in care homes that occurred in week 14 in addition to the bank holiday period. 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

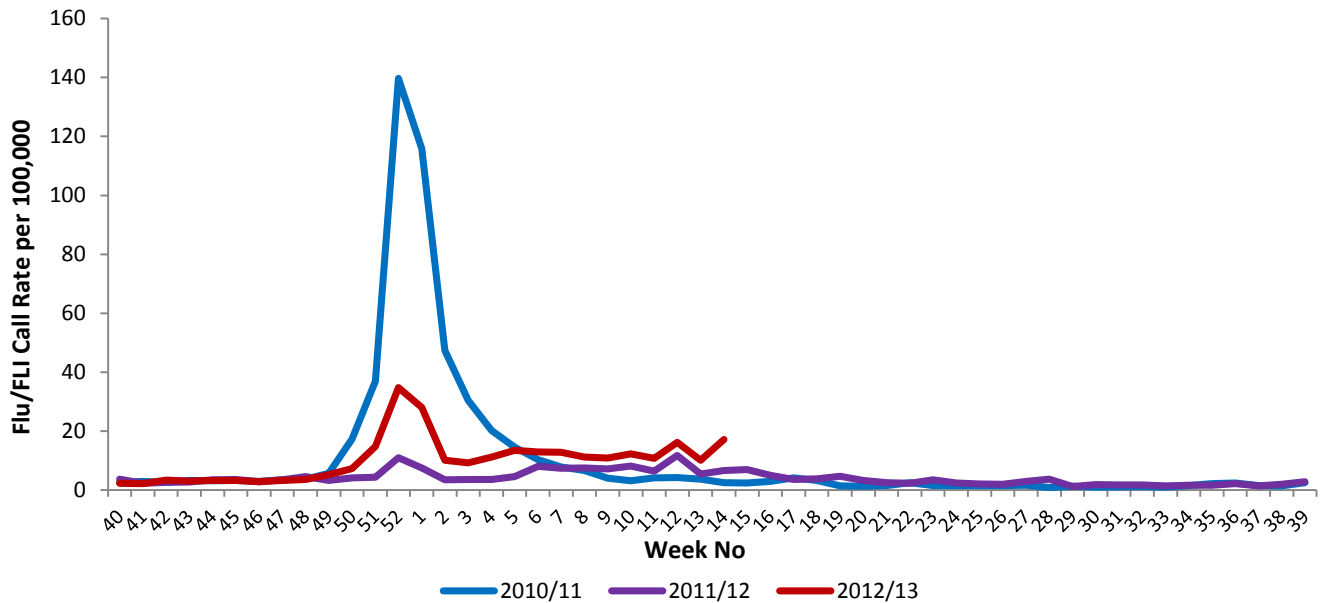
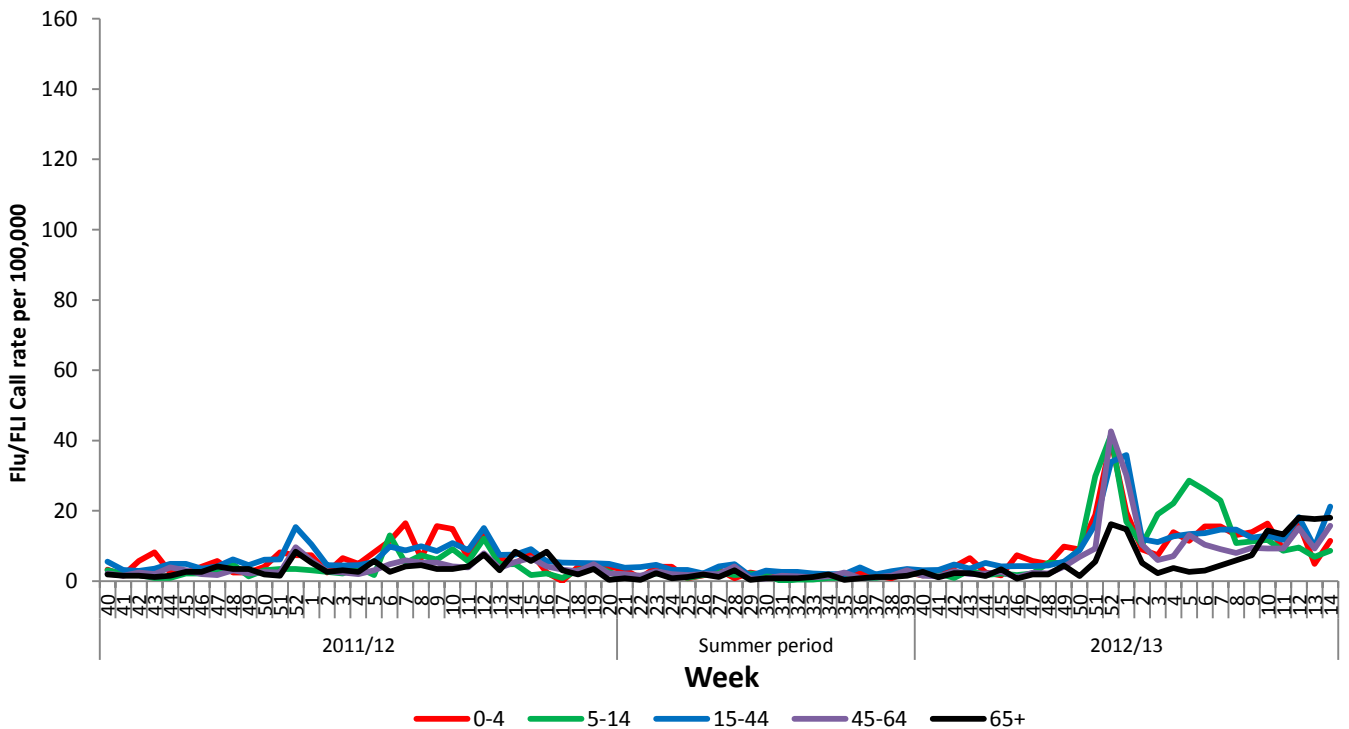


Figure 6. OOH Call rates of flu and flu-like illness by age-group from week 40, 2011



Comment

OOH consultation rates for 'flu/FLI increased from 10.1 per 100,000 population in week 13 to 17.2 per 100,000 population in week 14, 2013, with rates remaining higher than the same period in both 2010/11 and 2011/12. This increase in rates is expected following the bank-holiday period in week 14 when GP practices would have been closed. All the age-specific rates showed an increase in week 14 although the over 65 year age group remained relatively stable. The highest age-specific rate in week 14 is in the 15-44 year age group. 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 14, 2013

Source	Specimens Tested	AH3	A(H1N1) pdm09	A (untyped)	Influenza B	RSV	Total influenza Positive	% Influenza Positive
Sentinel	1	1	0	0	0	0	1	100%
Non-sentinel	102	26	1	15	3	1	45	44%
Total	103	27	1	15	3	1	46	45%

Table 2. Cumulative Total Week 40, 2012 - Week 14, 2013

	AH3	A(H1N1) pdm09	A (untyped)	Flu B	Total Influenza	RSV
0-4	32	9	7	65	113	675
5-14	8	1	0	81	90	21
15-64	121	17	9	131	278	60
65+	250	6	13	48	317	64
Unknown	1	0	0	0	1	5
All ages	412	33	29	325	799	825

Table 3. Cumulative Total Week 40, 2012 - Week 14, 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	32	9	7	63	111	672
5-14	1	0	0	13	14	0	7	1	0	68	76	21
15-64	15	3	0	52	70	5	106	14	9	79	208	55
65+	13	1	0	2	16	1	237	5	13	46	301	63
Unknown	0	0	0	0	0	0	1	0	0	0	1	5
All ages	29	4	0	69	102	9	383	29	29	256	697	816

Note

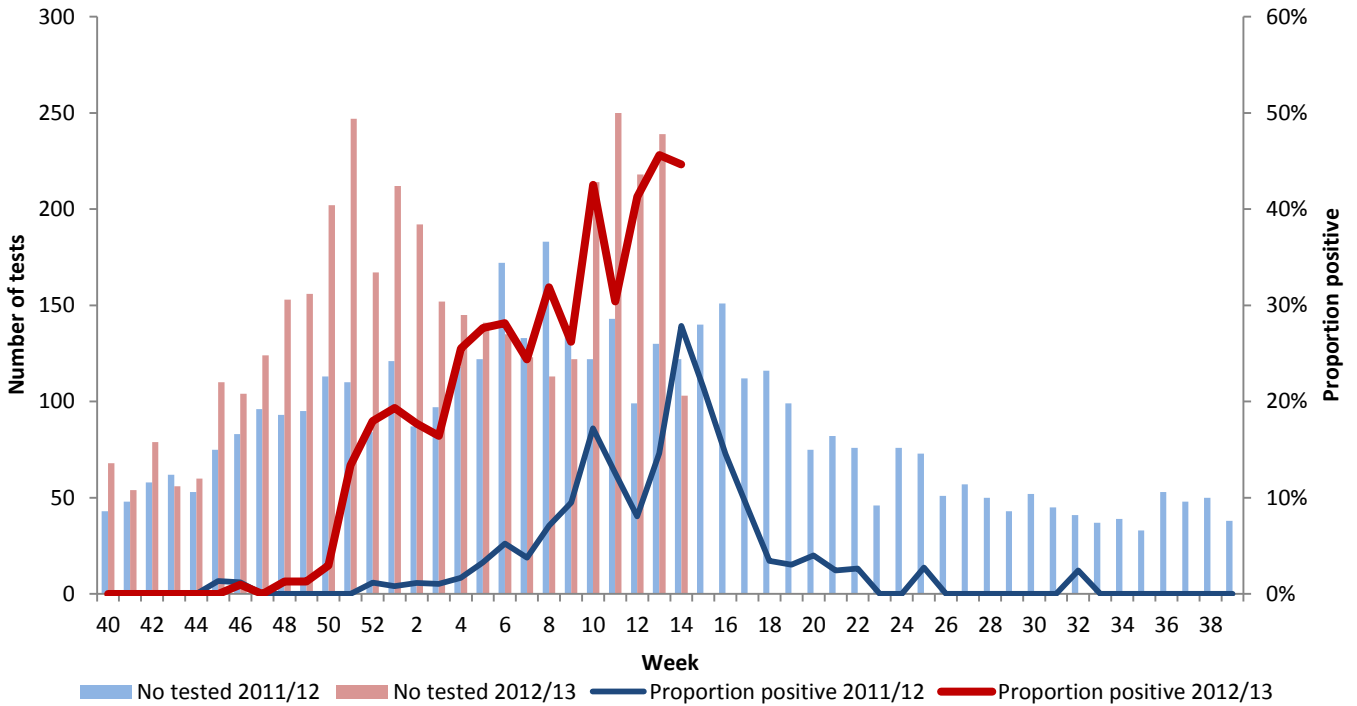
All virology data is provisional. The virology figures for previous weeks included in this or future bulletins are updated with data from laboratory returns received after the production of the last bulletin. The current bulletin reflects the most up-to-date information available.

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

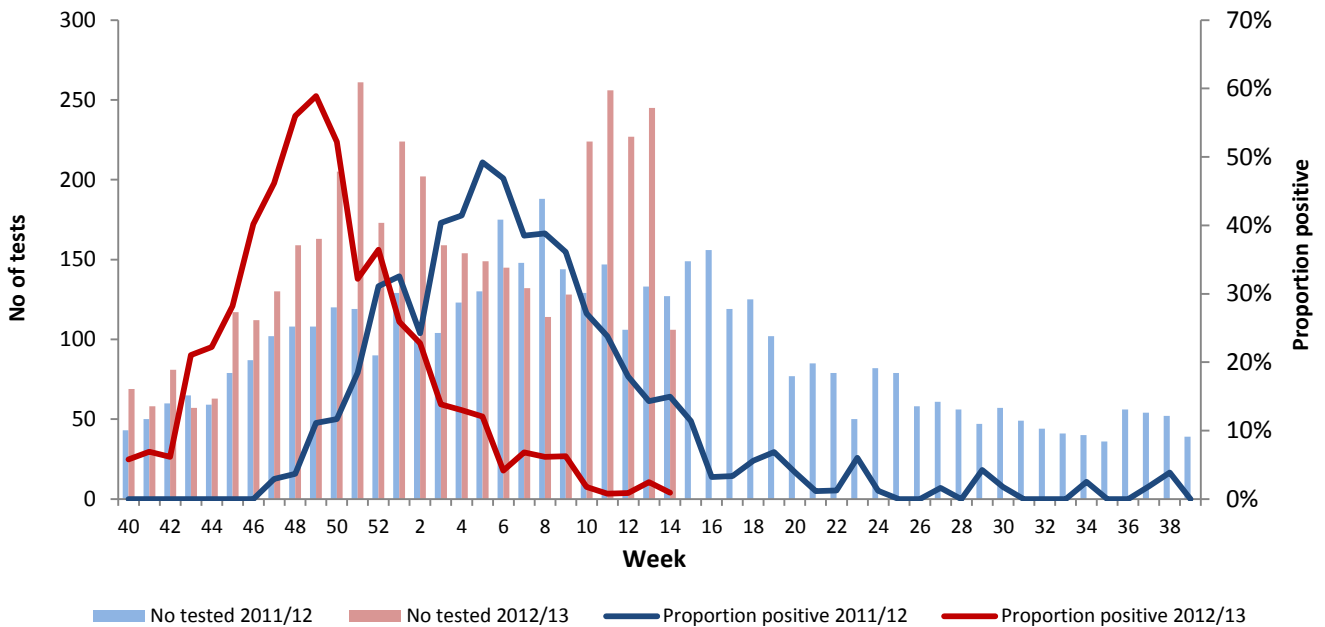
The numbers of specimens submitted for testing and influenza positivity rates continue to remain at high levels although numbers tested may now be decreasing. The current high levels are likely due, in part, to recent outbreaks in residential/nursing homes with approximately 57% of the influenza positives in week 14 in the over 65 year age group. There were 103 specimens submitted for testing in week 14, 2013, of which there were 27 positive detections of influenza A (H3), 15 influenza A (untyped), 3 influenza B and 1 influenza A(H1N1)pdm09. Influenza A remains the predominant type for both week 14, 2013 and for the season as a whole (59% of all influenza detections). To date this season there have been 474 detections of influenza A (412 influenza A(H3), 29 A (untyped) and 29 A (H1N1)pdm09) and a further 325 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 was only one RSV detection in week 14, 2013 with positivity rates remaining very low. From week 40 of the current season there have been a total of 825 RSV positive detections reported, of which 82% fall in the 0-4 year age group. RSV positivity trends are similar to 2011/12 but are approximately six weeks earlier. (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 six new admissions to ICU confirmed with influenza reported in week 14, 2013. To date there have been 46 cases (34 adults, 12 children) admitted to ICU that have been confirmed with influenza; 21 of which were confirmed with influenza B, 10 with influenza A(H3), 3 influenza A(H1N1)pdm09 and 6 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	4	3	7
45-64	8	5	13
65+	9	5	14
All age groups	25	21	46

Mortality Surveillance

There was one death in ICU patients with laboratory confirmed influenza reported in week 14, 2013; with the total this season now at seven. All those who died had existing co-morbidities.

Outbreak Surveillance

There were no new confirmed influenza outbreaks reported in week 14, 2013; however, there were two suspected influenza outbreaks that are currently awaiting laboratory results. The total number of confirmed influenza outbreaks reported so far this season is 27* compared to a total of ten outbreaks for the 2011/12 season. Of the 27 outbreaks 24 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.

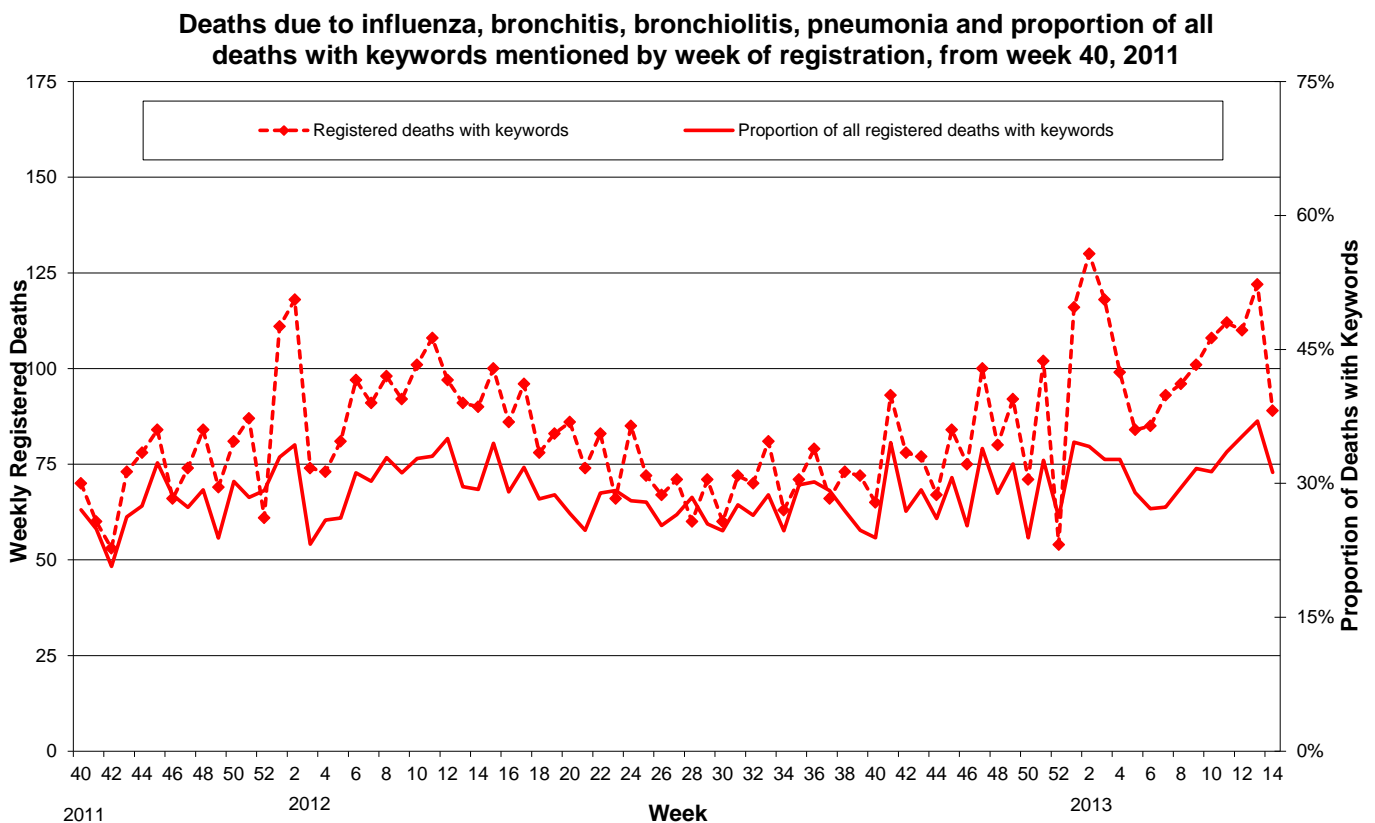
This appears to be a similar pattern to the previous season where all the confirmed influenza outbreaks that were reported occurred at the end of the influenza season in April 2012 despite the relatively low consultation rates in both the sentinel GP practices and OOH.

* an outbreak reported in week 13 was subsequently confirmed as influenza last week with the number reported in week 13 now being 9.

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 from 37% in week 13 to 31% in week 14, 2013. Similarly the number of registered deaths due to respiratory keywords has also decreased; however, this decrease is likely due to the bank holiday period. In week 14, 2013 there were 285 registered deaths of which 89 related to these specific respiratory infections.

Vaccine Uptake

As at the end of January 2013, the proportion of people in Northern Ireland aged 65 years and over who had received the seasonal influenza vaccine was 74.6%, while the uptake in those aged under 65 in an at-risk group was 78.6% (provisional data). This compares with 76.6% uptake in the over 65 years, and 82.5% 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. Active influenza transmission began around week 49/2012 with ILI/ARI rates peaking in almost all countries between weeks 52/2012 and 8/2013.

- Nineteen of 26 reporting countries indicated low-intensity transmission.
- Decreasing or stable trends were reported by almost all reporting countries.
- The proportion of influenza-positive sentinel specimens remained high (40%) but has continued to decrease since the peak observed in week 5/2013 (61%) and with a considerably lower number of specimens 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(H1)pdm09 viruses has been 63%.
- Thirty-two hospitalised laboratory-confirmed influenza cases were reported by six countries, including one fatality.
- 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 slowly moving towards its close.

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

Worldwide (WHO)

- Influenza activity in North America continued to decrease overall, though activity remained high in some areas. Proportionally influenza B increased although influenza A(H3N2) was the most commonly detected virus in North America overall for this season. In the United States of America this season has been more severe than any since 2003-4 as reflected in numbers of pneumonia and influenza deaths with the highest impact for individuals over the age of 65 years.
- Influenza activity continued to decline in the most part of Western Europe, while it remained elevated in the eastern part of the region. The proportion of subtypes of viruses circulating was not uniform across the continent and has changed through the season. It has been notably different from North America with a mix of A(H3N2) and A(H1N1)pdm09 and B viruses. Influenza B mainly reported in western and northern countries and influenza A in eastern and central Europe. Excess mortality in most countries has been moderate and most deaths occurred among people aged 65 and older.

- Influenza activity throughout the temperate region of Asia decreased overall with the exception of Mongolia where activity levels were sustained but still within seasonal tolerance levels.
- 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.
- As of 9 April Chinese health authorities have informed WHO of laboratory confirmed cases of human infection of influenza A(H7N9). To date there have been a total of 24 cases that have been laboratory confirmed including seven deaths. <http://www.who.int/csr/don/en/>

http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/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:

Paul Cabrey
Epidemiological Scientist
Public Health Agency
028 90321313 Ext 2431

Dr. Naomh Gallagher
Senior Epidemiological Scientist
Public Health Agency
028 90321313 Ext 2857

Email: flusurveillance@hscni.net

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This report was compiled by Paul Cabrey, Dr. Naomh Gallagher and Dr. Brian Smyth.