

Influenza Weekly Surveillance Bulletin

Northern Ireland, Weeks 48 - 49 (24 November – 7 December 2014)

Summary

- Influenza activity in Northern Ireland has increased but remains at low levels.
- GP consultation rates for combined flu and flu-like illness (flu/FLI) remain below the updated pre-epidemic Northern Ireland threshold of 52.0 per 100,000 population at 14.3 and 15.7 per 100,000 population in weeks 48 and 49 respectively, with most indicators remaining at low levels.
- The OOH consultation rate for flu/FLI increased but remained low in weeks 48 and 49 at 4.1 and 4.6 per 100,000 population respectively. The rate remained relatively low in all age groups with the highest rate noted among the 0-4 years age group.
- RSV activity has increased in weeks 48 and 49.
- Influenza vaccine uptake to 31st October 2014 was 60.4% for those aged 65 and over, 50.6% for those aged under 65 and in an at risk group, 41.4% among 2-4 year old children and 80.0% among children in P1 to P7.
- There were no admissions to ICU with confirmed influenza reported in weeks 48 and 49, 2014.
- There were no deaths in ICU patients with laboratory confirmed influenza reported in weeks 48 and 49, 2014.
- There were no confirmed influenza outbreaks reported to PHA in weeks 48 and 49, 2014.
- In weeks 48 and 49 2014 EuroMOMO did not report an excess in mortality.
- In weeks 48 and 49, 2014 there were fewer than five attendances for influenza like illness across the contributing emergency departments.

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);
- Excess mortality estimations are also provided by Public Health England using the EuroMOMO (Mortality Monitoring in Europe) model based on raw death data supplied by NISRA;
- Critical Care Network for Northern Ireland reports on critical care patients with confirmed influenza;
- Emergency department syndromic surveillance system (EDSSS) which includes attendance data from 4 emergency departments in Northern Ireland.

Sentinel GP Consultation Data

Figure 1. Sentinel GP consultation rates for flu/FLI 2012/13 - 2014/15

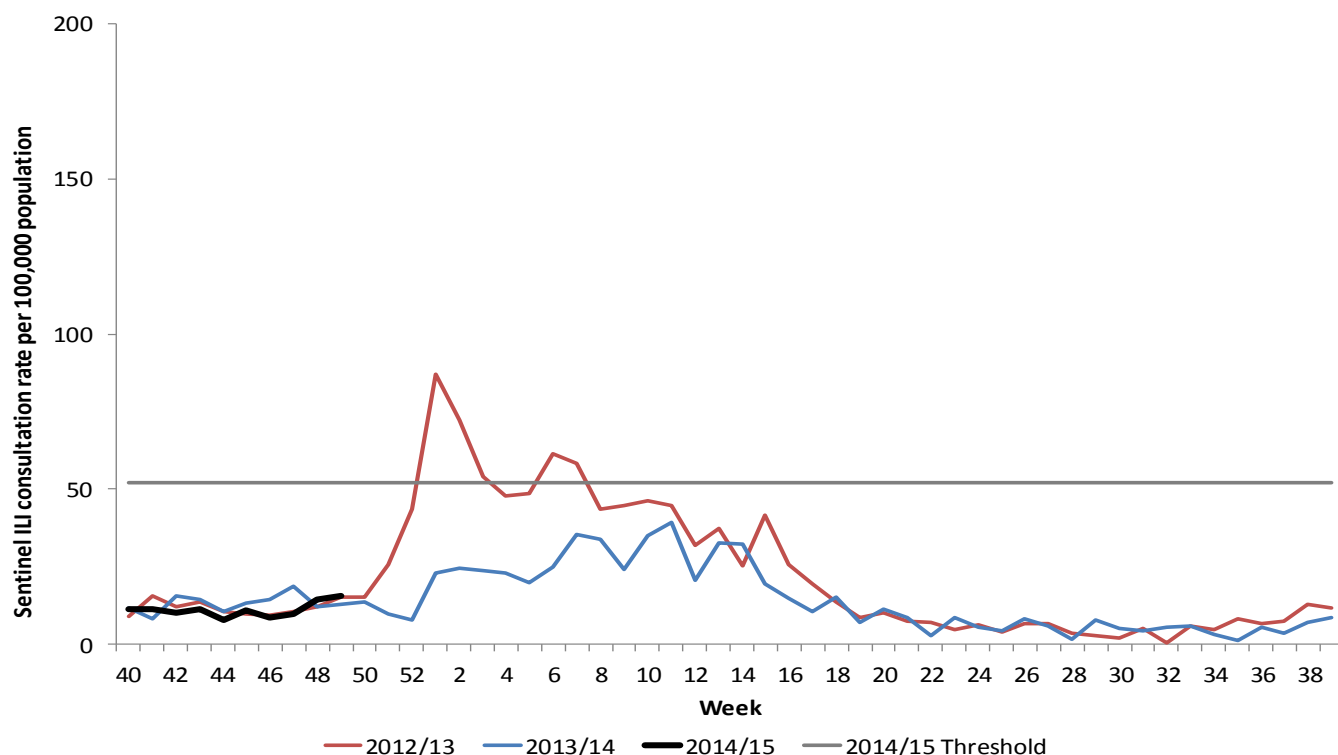


Figure 2. Sentinel GP combined consultation rates for flu/FLI and number of influenza positive detections 2009/10 – 2014/15

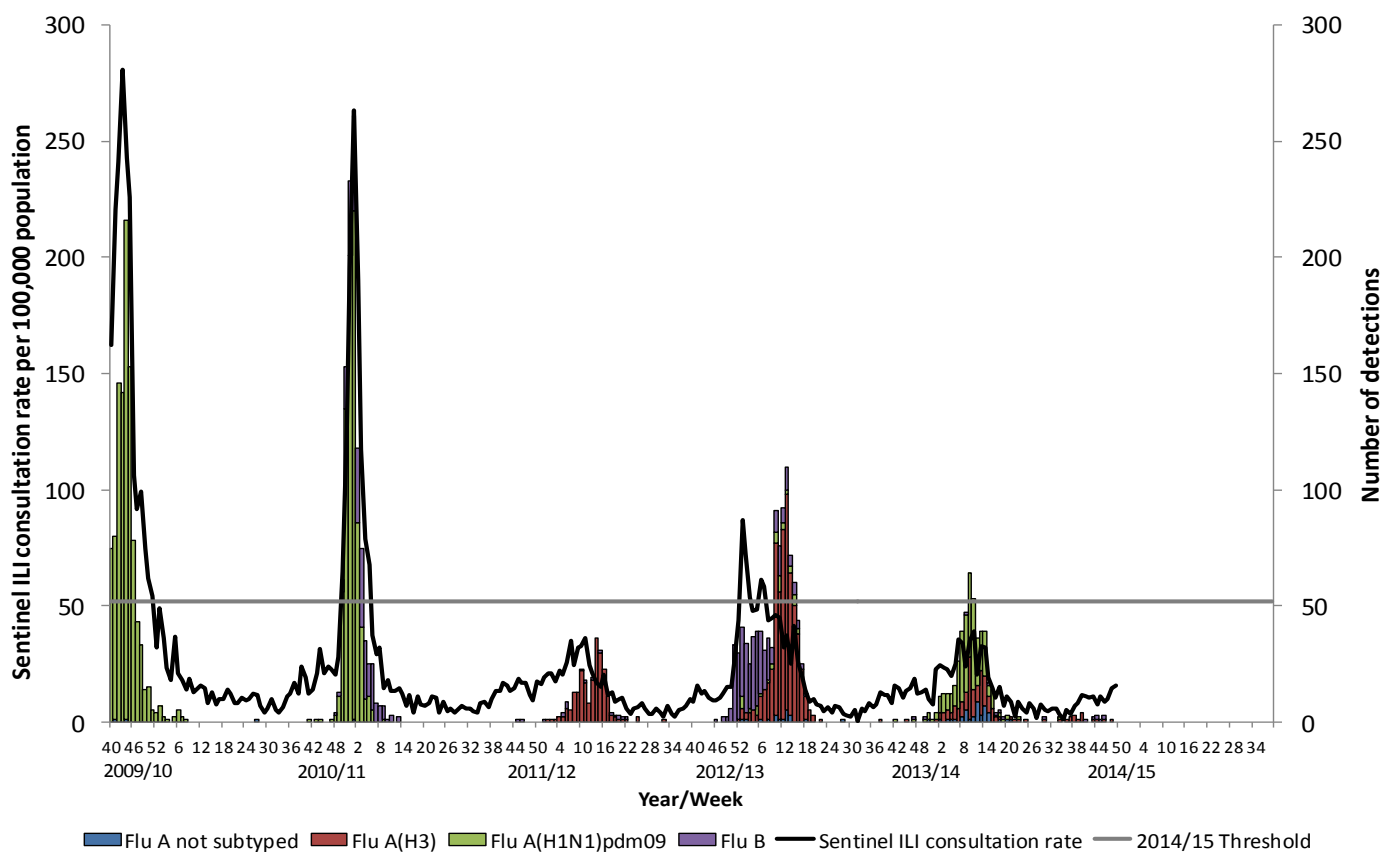
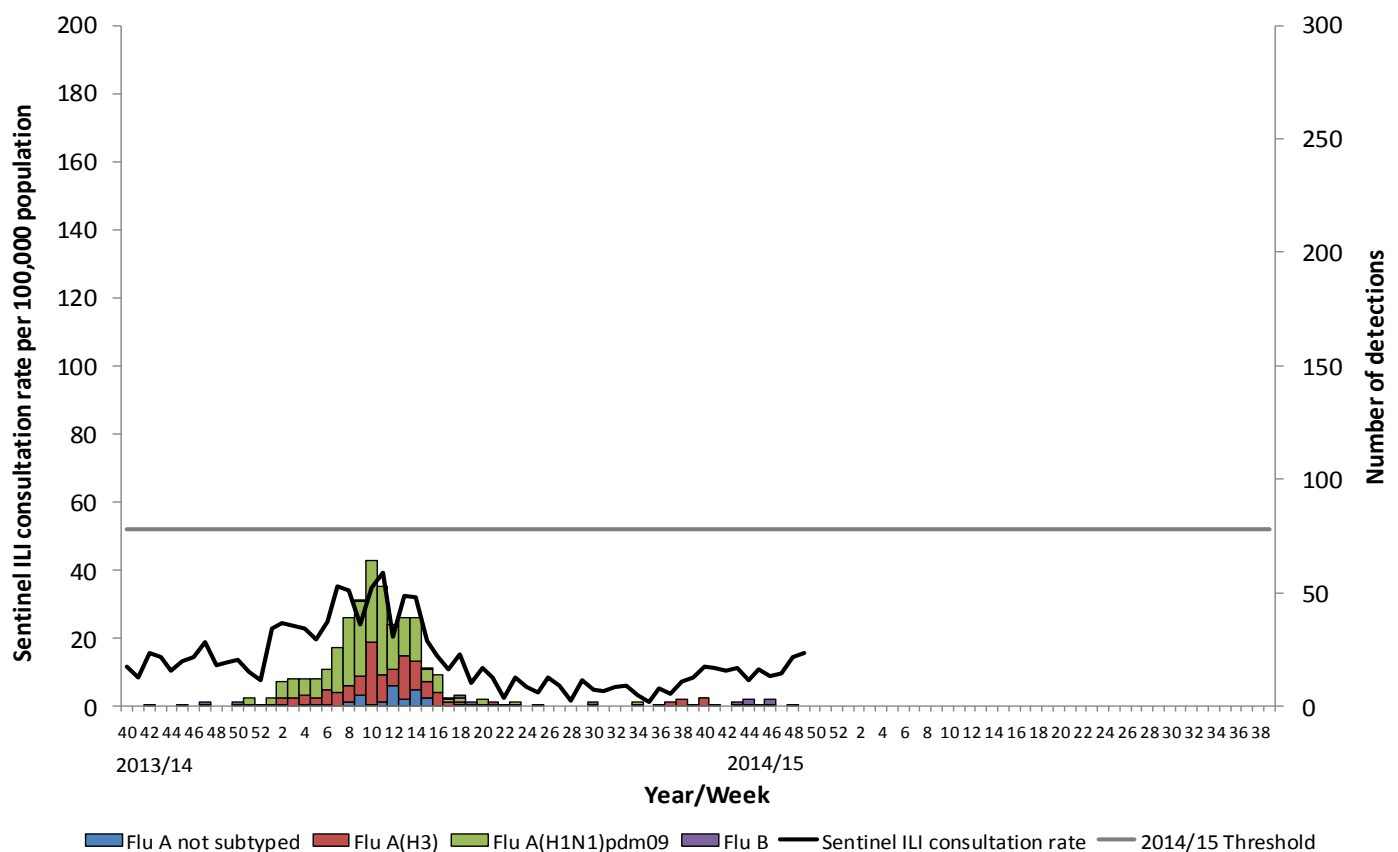


Figure 3. Sentinel GP consultation rates for flu/FLI and number of virology 'flu detections from week 40, 2013

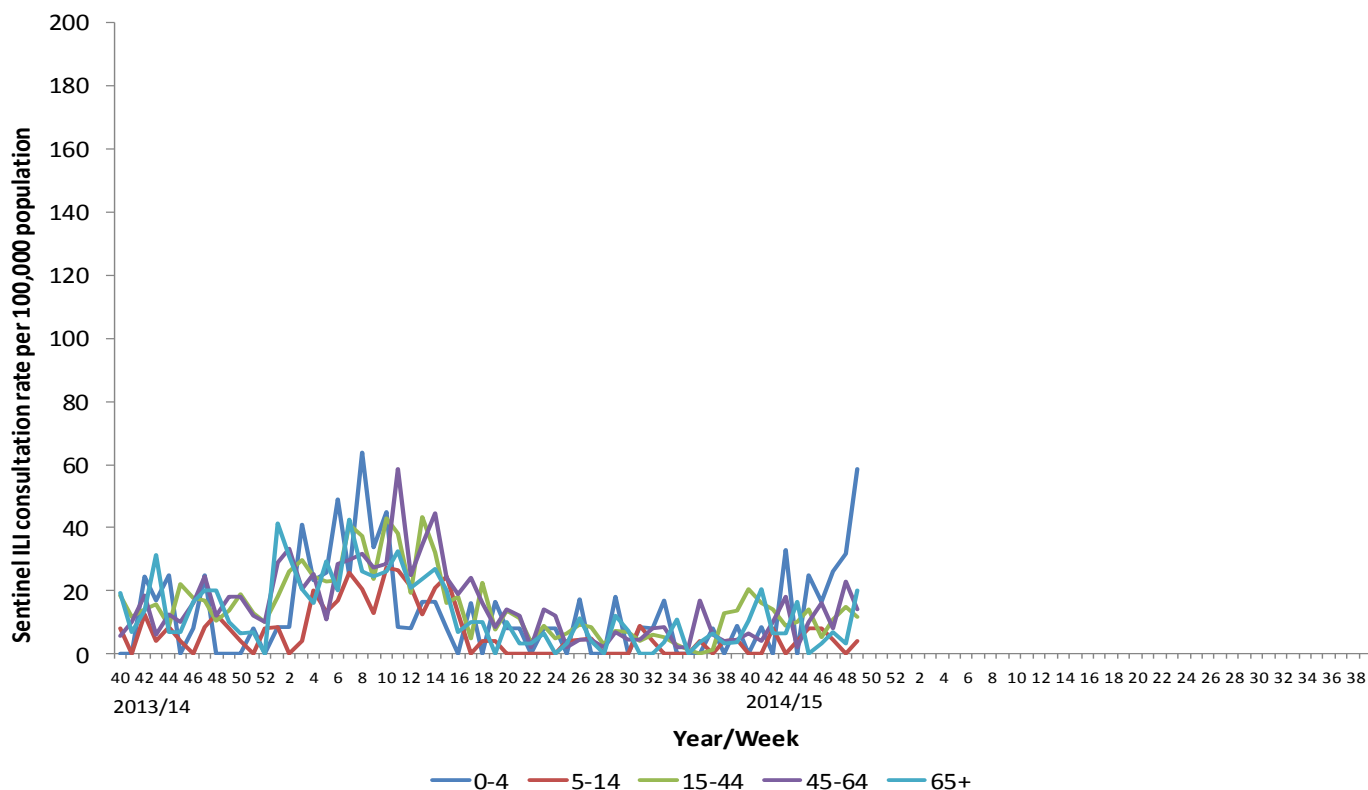


Comment

GP consultation rates have steadily increased but remained low throughout weeks 48 to 49. In week 48 the GP consultation rate increased from the previous week to 14.3 per 100,000 population, increasing further in week 49 to 15.7 per 100,000 population. The rate for week 49, 2014 is slightly higher than the same week last year but similar to the same period in 2012/13.

Rates remain well below the pre-epidemic Northern Ireland 2014/15 threshold of 52.0 per 100,000 population (Figures 1, 2 and 3).

Figure 4. Sentinel GP age-specific consultation rates for flu/FLI from week 40, 2013



Comment

GP consultations remained low for almost all age groups in weeks 48 to 49, with a marked increase noted among the youngest age group, however small numbers may have contributed to this increase.

In week 48 the 0-4, 15-44 and 45-64 years age groups showed an increase in consultation rates when compared with the previous week, while rates among those aged 5-14 and 65 years and over decreased. In week 49, GP consultation rates among those aged 0-4 significantly increased, while an increase was also noted among those aged 5-14 and 65 years and over. GP consultation rates among those aged 15-44 and 45-64 years displayed a decrease.

In general, GP consultation rates for combined flu' and flu'-like-illness in all age groups have fluctuated in recent weeks while consistent increases were noted among the youngest and oldest age groups. The highest age-specific consultation rate in week 49 2014, was again noted in the 0-4 years age group, representing the highest age-specific rate noted this season to date and also higher than displayed among this age group during the same period in previous years. It should however be noted that while the rate has increased, there were fewer than ten flu/FLI consultations within this age group in week 49 (Figure 4).

Out-of-Hours (OOH) Centres Call Data

Figure 5. OOH call rate for flu/FLI, 2012/13 – 2014/15

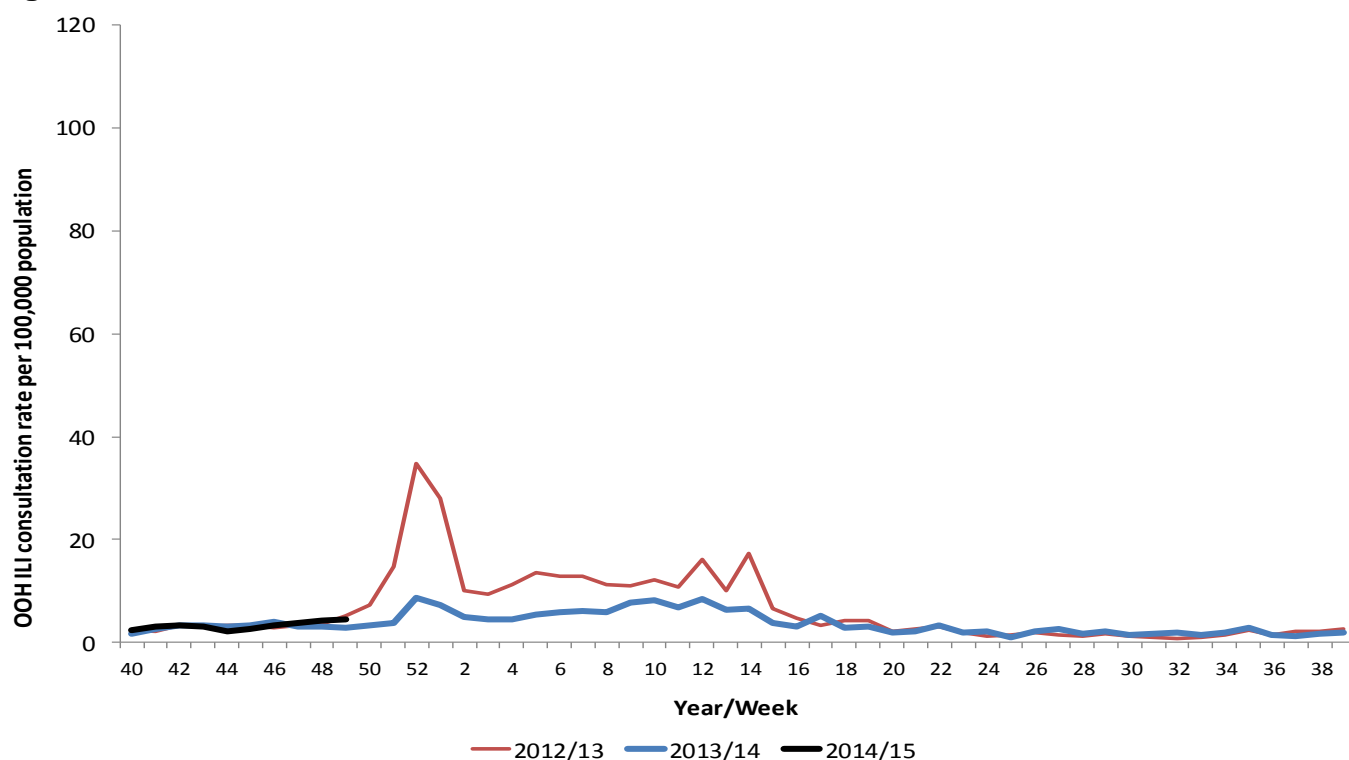
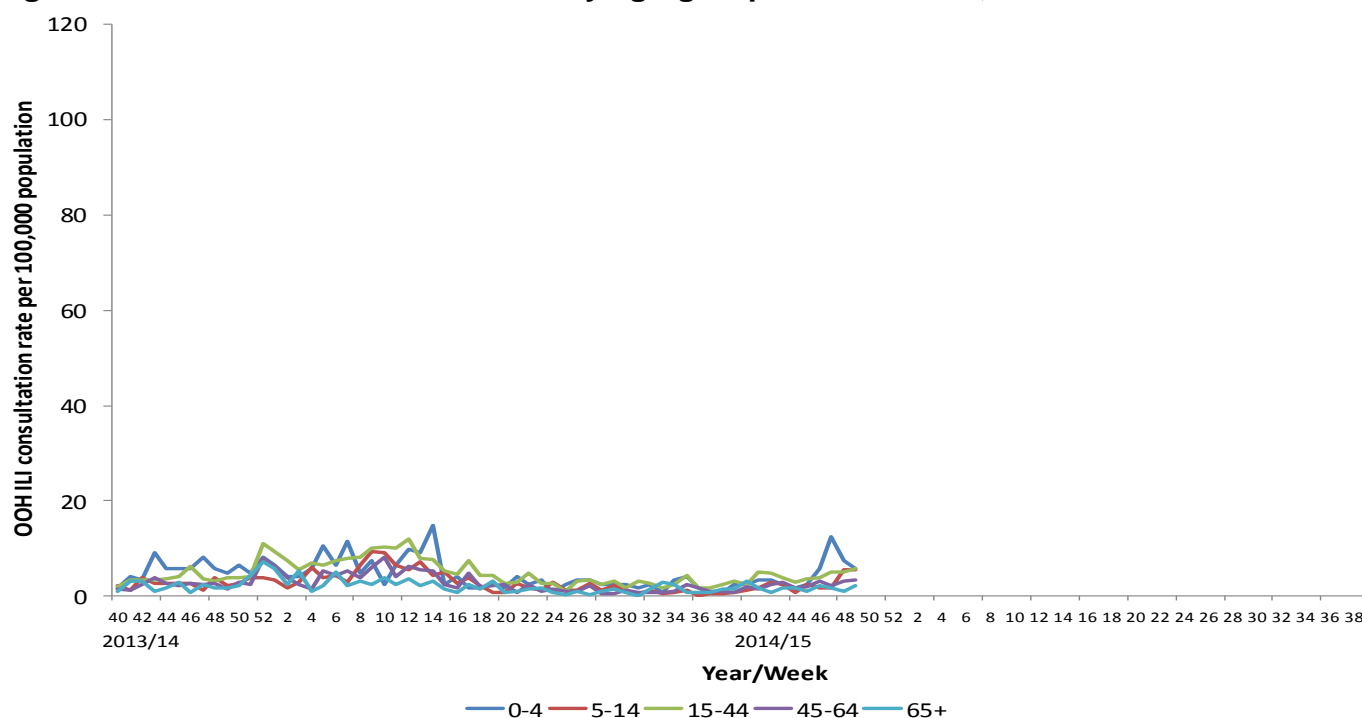


Figure 6. OOH Call rates of flu/FLI by age-group from week 40, 2013



Comment

The OOH consultation rate for flu/FLI has steadily increased but remained low throughout weeks 48-49, similar to previous years at 4.1 and 4.6 per 100,000 population respectively. The OOH flu/FLI rate remained relatively low in all age groups. In weeks 48 and 49, 2014 rates have steadily increased among those aged 15-44 and 45-64 years while rates among those aged 5-14

years increased in week 48 and remained stable in week 49. Flu/FLI OOH consultation rates steadily decreased among those aged 0-4 years, while rates among the 65 years and over age group fluctuated throughout the two-week period, decreasing slightly in week 48 and increasing in week 49. This fluctuation however may be accounted for by small numbers (Figures 5 and 6).

Virology Data

Table 1. Virus activity in Northern Ireland, Week 48 - 49, 2014/15

Source	Specimens Tested	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	RSV	Total influenza Positive	% Influenza Positive
Sentinel	5	0	0	0	0	0	0	0%
Non-sentinel	153	1	0	0	0	35	1	1%
Total	158	1	0	0	0	35	1	1%

Table 2. Cumulative virus activity in Northern Ireland, Week 40 - 49, 2014/15

	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	Total Influenza	RSV
0-4	3	0	0	3	6	70
5-14	0	0	0	2	2	2
15-64	3	1	0	2	6	3
65+	2	0	0	0	2	1
Unknown	0	0	0	0	0	1
All ages	8	1	0	7	16	77

Table 3. Cumulative virus activity, Week 40 - Week 49, 2014/15

	Sentinel						Non-sentinel					
	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	Total Influenza	RSV	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	Total Influenza	RSV
0-4	1	0	0	0	1	0	2	0	0	3	5	70
5-14	0	0	0	0	0	0	0	0	0	2	2	2
15-64	0	1	0	1	2	0	3	0	0	1	4	3
65+	0	0	0	0	0	0	2	0	0	0	2	1
Unknown	0	0	0	0	0	0	0	0	0	0	0	1
All ages	1	1	0	1	3	0	7	0	0	6	13	77

Note

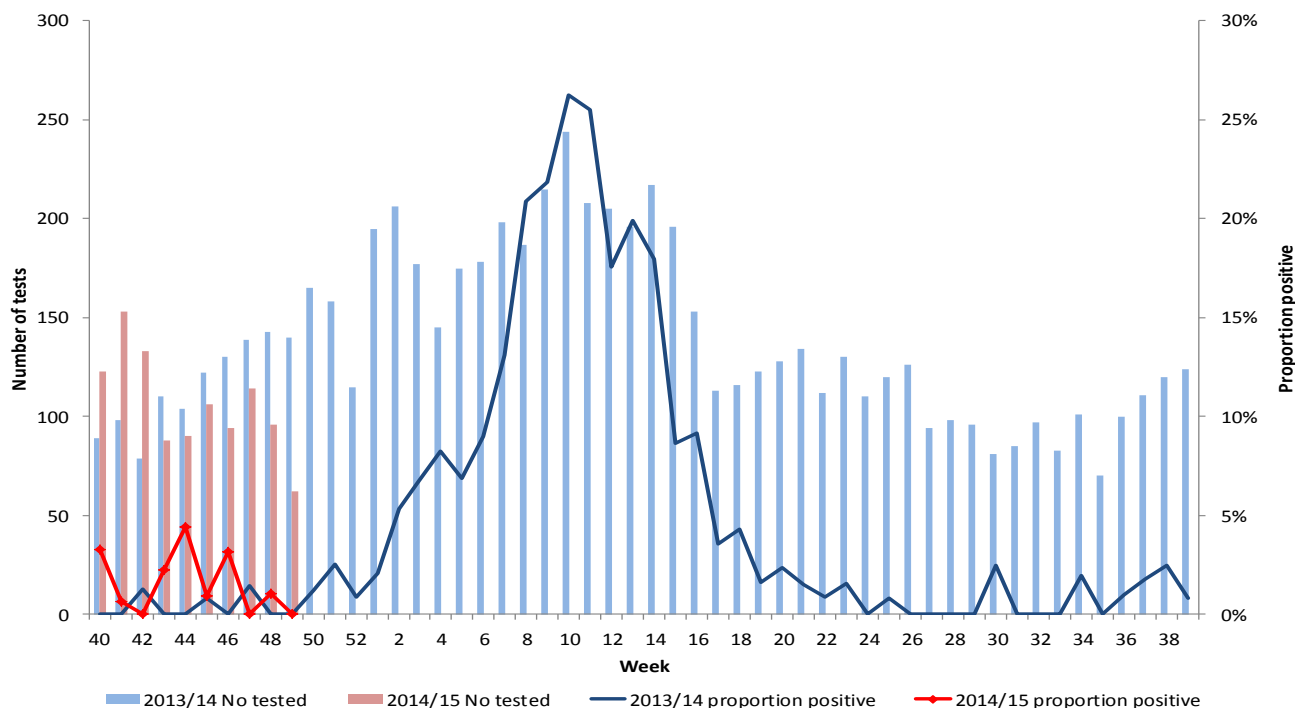
All virology data is provisional. The virology figures for previous weeks included in this or future bulletins are updated with data from laboratory returns received after the production of the last bulletin. The current bulletin reflects the most up-to-date information available.

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

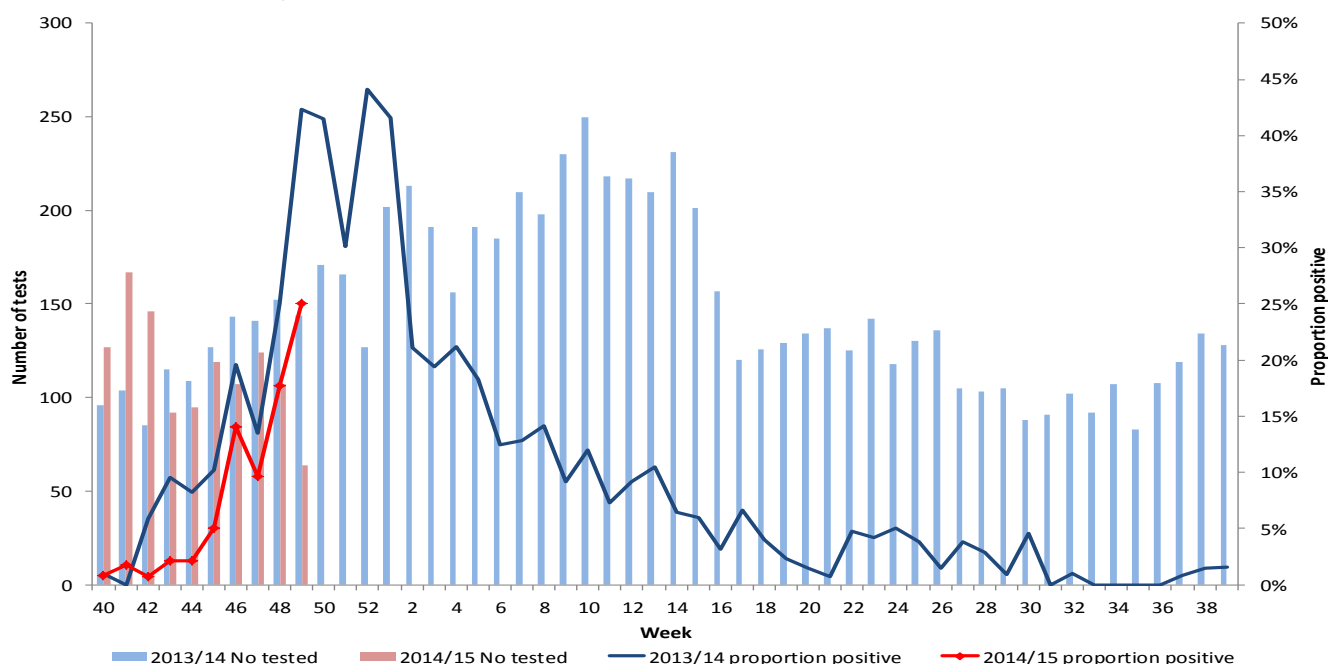
During weeks 48 to 49, there were 153 specimens submitted for testing, of which 1 was confirmed as influenza A (H3); lower than the previous 2-week period but similar to the same period last year. Positivity rates for influenza have remained low throughout the 2-week period (Figure 7).

Figure 7. Number of samples tested for influenza and proportion positive, 2013/14 and 2014/15, all sources



Respiratory Syncytial Virus

Figure 8. Number of samples tested for RSV and proportion positive, 2013/14 and 2014/15, all sources



Comment

There were 35 RSV positive detections between weeks 48 and 49 with positivity rates increasing from 10% in week 47 to 18% in week 48, and increasing further to 25% in week 49, however this should be interpreted with caution as the most recent week's data is at this stage incomplete—more accurate data will be available in the next bulletin. Despite rising, the positivity rate is lower than the same period in recent seasons. There have been a total of 77 detections of RSV since the beginning of the 2014-15 influenza season, of which 91% fall within the 0-4 years age group (Figure 8, Table 2).

Influenza Vaccine Uptake

To 31st October 2014, provisional data suggested that vaccine uptake for those aged 65 years and over was 60.4%, lower than the same period in the 2013 (61.2%); while 50.6% of those under 65 and in an at risk group had received the vaccine, lower than in 2013 when 55.3% had received the vaccine during the same period.

This season for the first time, all children aged between 2 and 4 years and all those in P1 – P7 have been offered the seasonal influenza vaccine. To 31st October 2014, provisional data suggested that vaccine uptake among 2-4 year old children was 41.4%, while provisional uptake among children in P1 – P7 was 80.0%. Provisional uptake rates to 30th November will be available in the coming weeks.

Emergency Department Syndromic Surveillance System

In weeks 48 and 49 there were fewer than five influenza-like-illness (ILI) attendances reported in EDSSS. Later in the season the bulletin will include a graphical representation of ILI attendances if numbers increase.

ICU/HDU Surveillance

There were no admissions to ICU or deaths in ICU patients confirmed with influenza reported in weeks 48 and 49, 2014.

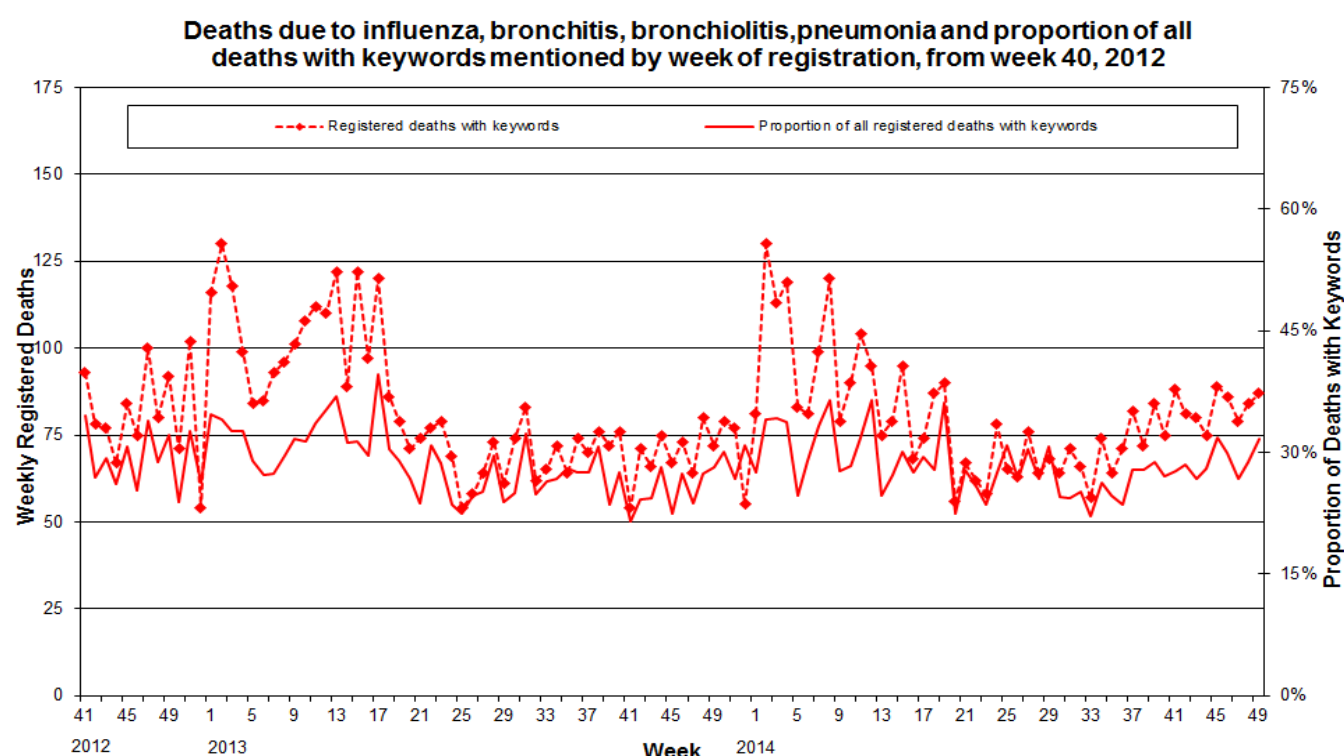
Outbreak Surveillance

There were no confirmed influenza outbreaks reported in weeks 48 and 49, 2014.

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



Comment

The proportion of deaths related to respiratory keywords has increased across the 2-week period. During week 48, 2014 the proportion of registered deaths increased to 29%, from 27% the previous week, increasing further to 32% in week 49, remaining slightly higher than the same period in 2013 (28%).

The number of registered deaths due to respiratory keywords increased to 84 in week 48, compared with 79 in week 47. In week 49, 2014, there were 275 registered deaths of which 87 related to these specific respiratory infections.

EuroMOMO

In weeks 48 and 49, no excess all-cause mortality was reported in Northern Ireland. This data will be presented in a chart later in the season.

International Summary

Europe

Week 48, 2014:

- In week 48/2014, influenza activity remained low across the WHO European Region.
- Fourteen countries reported sporadic influenza activity and six reported increasing trends in consultations for influenza-like illness (ILI) and/or acute respiratory infection (ARI).
- Of the 889 specimens tested from sentinel ILI and ARI sources from 31 countries, 29 (3%) from 12 countries tested positive for influenza virus. At present, most circulating viruses are A(H3N2) and influenza B.
- The number of hospitalized laboratory-confirmed influenza cases increased from the previous week, with two countries reporting a total of 13 cases for week 48/2014. All were admitted to intensive care units.

Season:

- Although sporadic influenza virus detections are being reported in an increasing number of countries, there is no indication that the influenza season has started in the Region, which is normal for this time of year.
- No indications of increased mortality due to influenza have been reported through the European monitoring of excess mortality for public health action project (EuroMOMO – <http://www.euromomo.eu>).

External News:

- The United States Centers for Disease Control and Prevention (CDC) reported that less than 50% of the A(H3N2) viruses characterised during this season showed a good match with the current A(H3N2) component of the seasonal influenza vaccine (<http://emergency.cdc.gov/han/han00374.asp>).

<http://www.flunewseurope.org/>

Worldwide (WHO)

As at 1st December 2014:

Globally, influenza activity was low, with the exception of some Pacific Islands.

- In North America, influenza activity continued to increase.
- In Europe overall influenza activity increased slightly but remained low.

- In tropical countries of the Americas, influenza detections remained low, with respiratory syncytial virus (RSV) causing most influenza-like illness (ILI) and severe acute respiratory infections (SARI) activity.
- In Africa and western and eastern Asia, influenza activity was low.
- In tropical Asia, influenza activity was low with influenza B predominant in Vietnam.
- In the southern hemisphere, influenza activity remained low except in several Pacific Islands where ILI activity remained high.
- Based on FluNet reporting (as of 27 November 2014, 14:25 UTC), during weeks 45 to 46 (2 November 2014 to 15 November 2014), National Influenza Centres (NICs) and other national influenza laboratories from 45 countries, areas or territories reported data. The WHO GISRS laboratories tested more than 34 452 specimens. 2572 were positive for influenza viruses, of which 2123 (82.5%) were typed as influenza A and 449 (17.5%) as influenza B. Of the sub-typed influenza A viruses, 27 (2.9%) were influenza A(H1N1)pdm09, 917 (97.0%) were influenza A(H3N2) and 1 (0.1%) was influenza A(H5). Of the characterized B viruses, 34 (94.4%) belonged to the B-Yamagata lineage and 2 (5.6%) to the B-Victoria lineage.
- Due to changes in data collection platforms, data from the WHO Regional Office for Europe are temporarily not available at the global level. Those data will be uploaded to FluNet and FluID as soon as possible. Information on European influenza activity can be found at <http://www.flunewseurope.org/>.

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

Acknowledgments

We would like to extend our thanks to all those who assist us in the surveillance of influenza in particular the sentinel GPs, Out-of-Hours Centres, Regional Virus Laboratory, Critical Care Network for Northern Ireland, Public Health England and NISRA. Their work is greatly appreciated and their support vital in the production of this bulletin.

Further information

Further information on influenza is available at the following websites:

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

<https://www.gov.uk/government/organisations/public-health-england>

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

<http://www.who.int>

<http://ecdc.europa.eu>

<http://euroflu.org>

Flusurvey, an online flu surveillance system run by the PHE and London School of Hygiene and Tropical Medicine was launched in 2013/14 and will continue into 2014/15. For further information and please see the [Flusurvey website](#).

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

Northern Ireland:

<http://www.publichealth.hscni.net/directorate-public-health/health-protection/seasonal-influenza>

England, Scotland and Wales:

<https://www.gov.uk/government/collections/seasonal-influenza-guidance-data-and-analysis#epidemiology>

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:

Chris Nugent
Surveillance Officer
Public Health Agency
028 9536 3407

Dr Naomh Gallagher
Senior Epidemiological Scientist
Public Health Agency
028 9536 3498

Email: flusurveillance@hscni.net

This report was compiled by Chris Nugent, Dr Naomh Gallagher and Dr Lucy Jessop.