

Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 15 (06 April 2015 – 12 April 2015)

Summary

- GP Influenza activity in Northern Ireland has slightly decreased and most indicators remain at a low level.
- GP consultation rates for combined flu and flu-like illness (flu/FLI) have decreased to 13.7 per 100,000 in week 15, 2015, and remain below the pre-epidemic Northern Ireland threshold of 52.0 per 100,000 population. The OOH consultation rate for flu/FLI has increased in week 15 to 10.3 per 100,000 population. The rate however remained relatively low in most age groups with the highest rate noted among those aged 15-44 years.
- RSV activity has decreased in week 15, 2015.
- Influenza vaccine uptake to 31st January 2015 was 71.7% for those aged 65 and over, 69.0% for those aged under 65 and in an at risk group, 53.8% among 2-4 year old children and 79.6% among children in P1 to P7.
- There have been no new admissions to ICU with confirmed influenza reported since the last bulletin; there have been a total of 57 ICU patients with confirmed influenza this season to date.
- There were no deaths in ICU patients with laboratory confirmed influenza reported since the last bulletin. There have been nine deaths in ICU patients with laboratory confirmed influenza this season to date.
- There have been no new confirmed influenza outbreaks reported to PHA in week 15, 2015.
- EuroMOMO reported no excess all-cause mortality in week 15, 2015.

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;

Sentinel GP Consultation Data

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

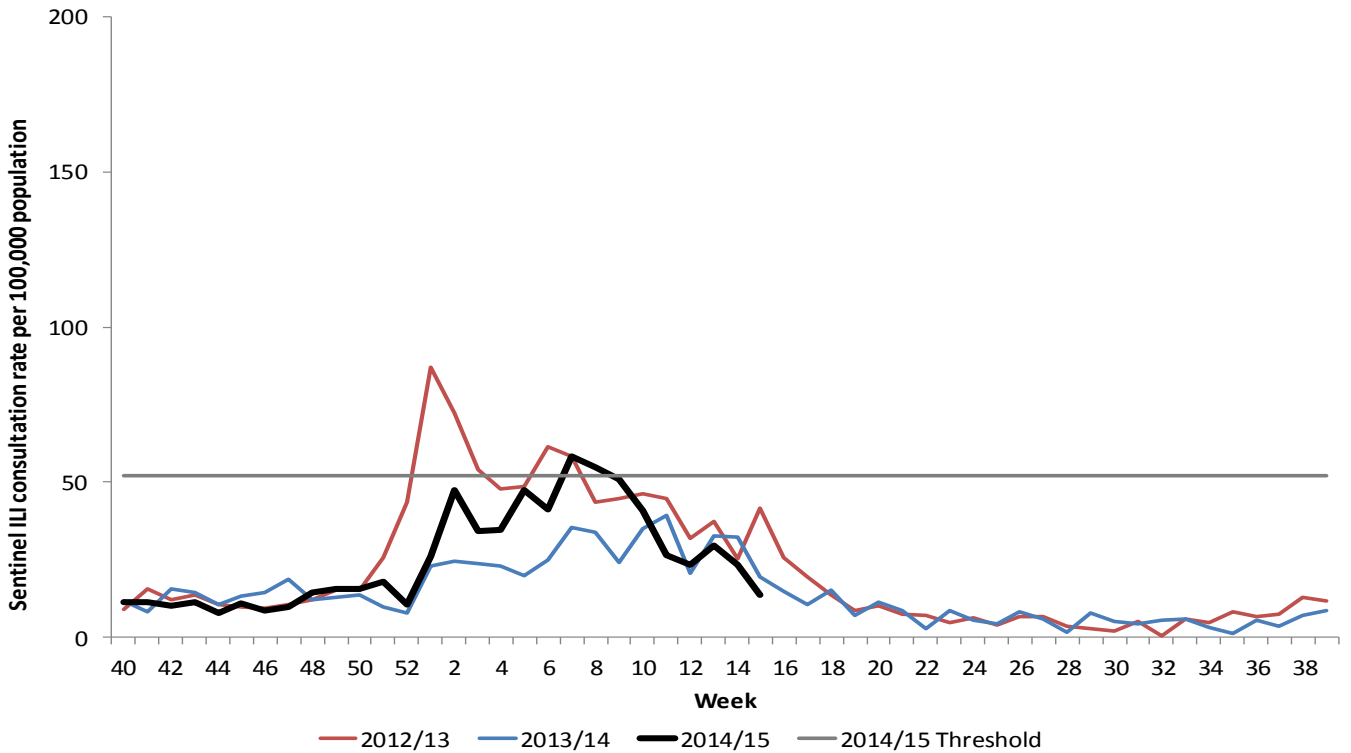


Figure 2. Sentinel GP combined consultation rates for flu/FLI and number of influenza positive detections 2009/10 – 2014/15

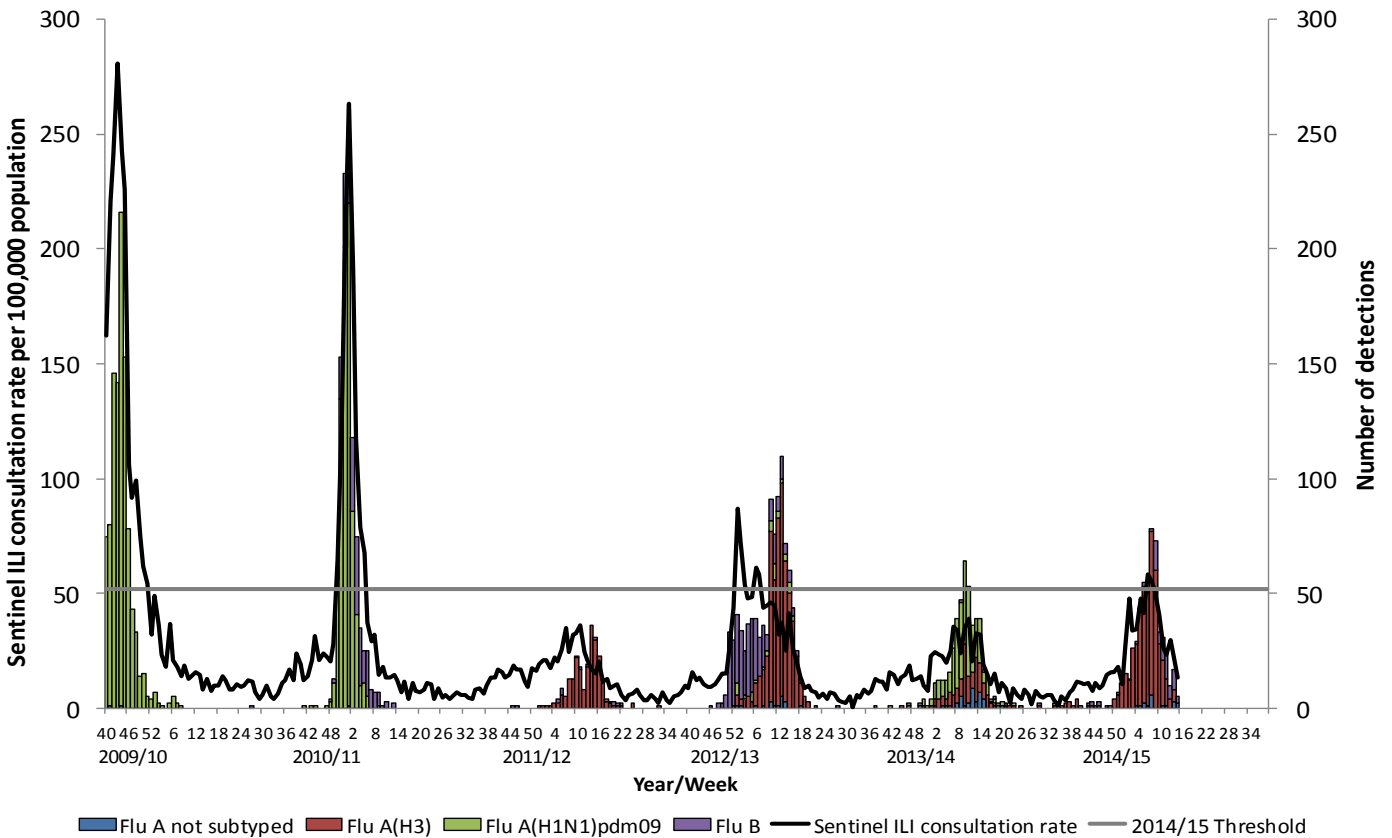
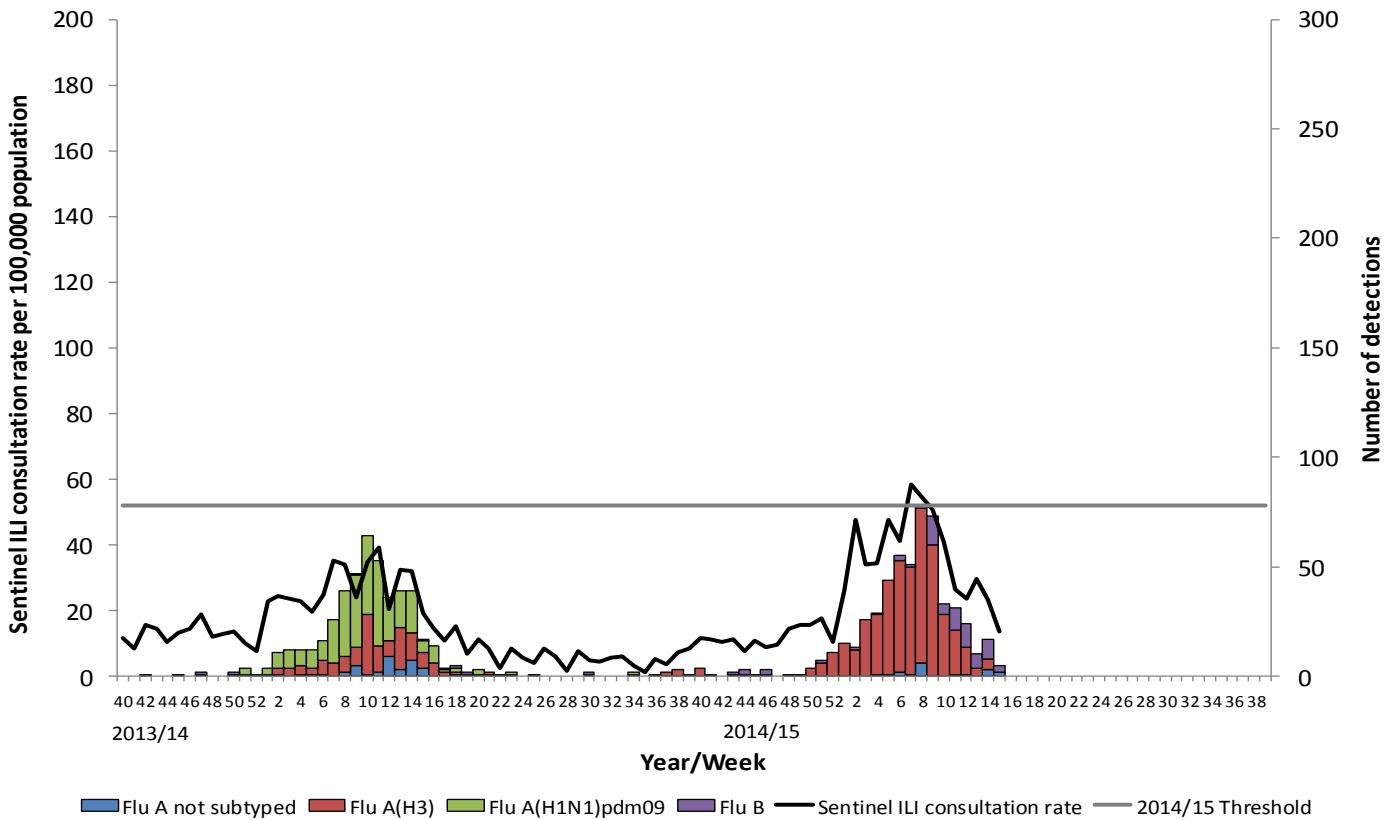


Figure 3. Sentinel GP consultation rates for flu/FLI and number of virology 'flu detections from week 40, 2013

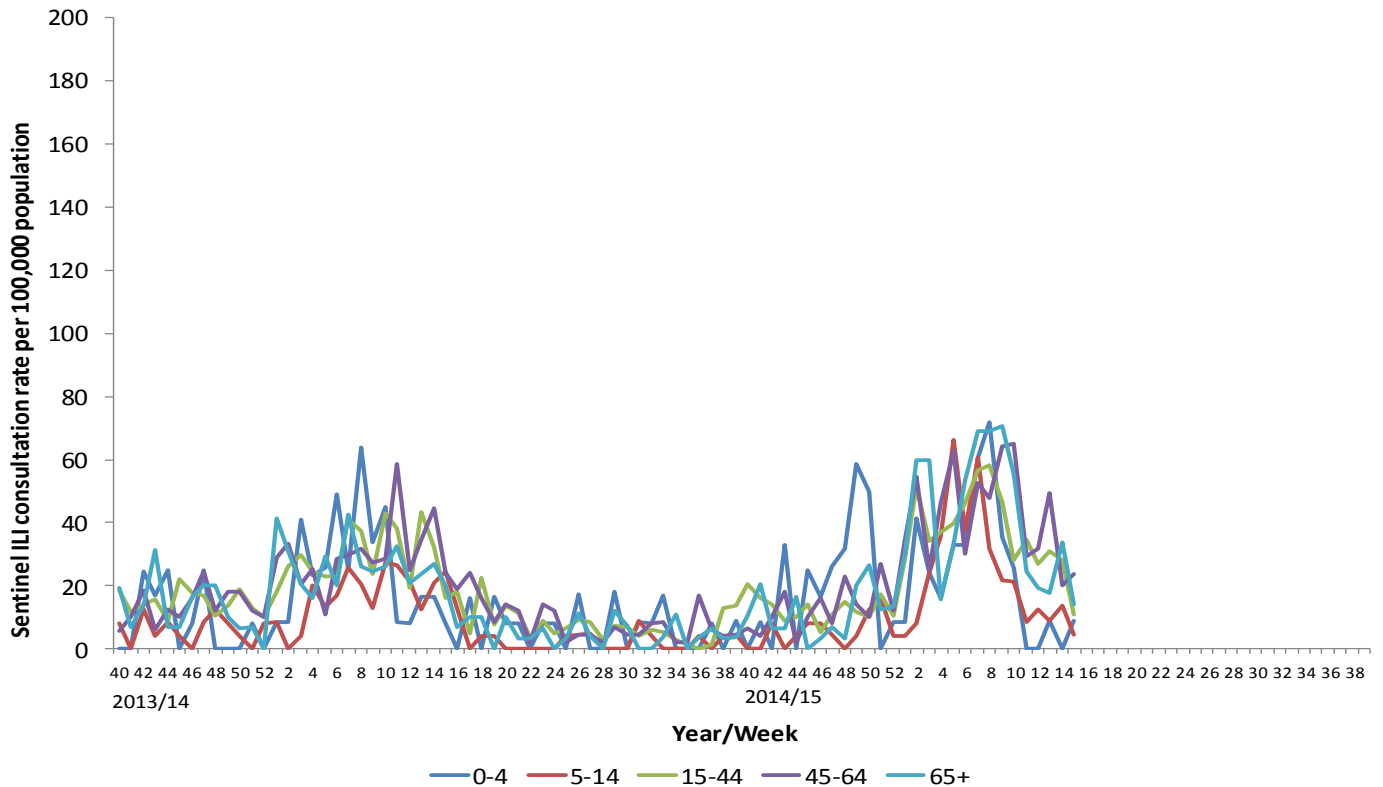


Comment

GP consultation rates have decreased in week 15 to 13.7 per 100,000 from 23.4 per 100,000 in week 14, 2015, and remain below the pre-epidemic Northern Ireland 2014/15 threshold of 52.0 per 100,000.

GP Flu/FLI consultations in week 15, 2015 are also lower than noted during the same period in both 2013/14 and 2012/13, however it should be noted that GP consultation rates this week may have been affected by the Easter bank holiday period (Figures 1, 2 and 3).

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



Comment

Sentinel GP flu/FLI consultations have decreased among most age groups in week 15, 2015, with the exception of the 0-4 and 45-64 years age groups where increases were noted.

In week 15, GP Flu/FLI consultation rates for combined flu' and flu'-like-illness decreased among those aged 5-14, 15-44 years and 65 years and over. Rates among those aged 0-4 and 45-64 year displayed an increase. Those aged 45-64 years represent the highest age-specific consultation rate this week.

Age-specific GP flu/FLI consultations have generally decreased in recent weeks and for most age groups are closer to the levels seen earlier in the season (Figure 4).

Out-of-Hours (OOH) Centres Call Data

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

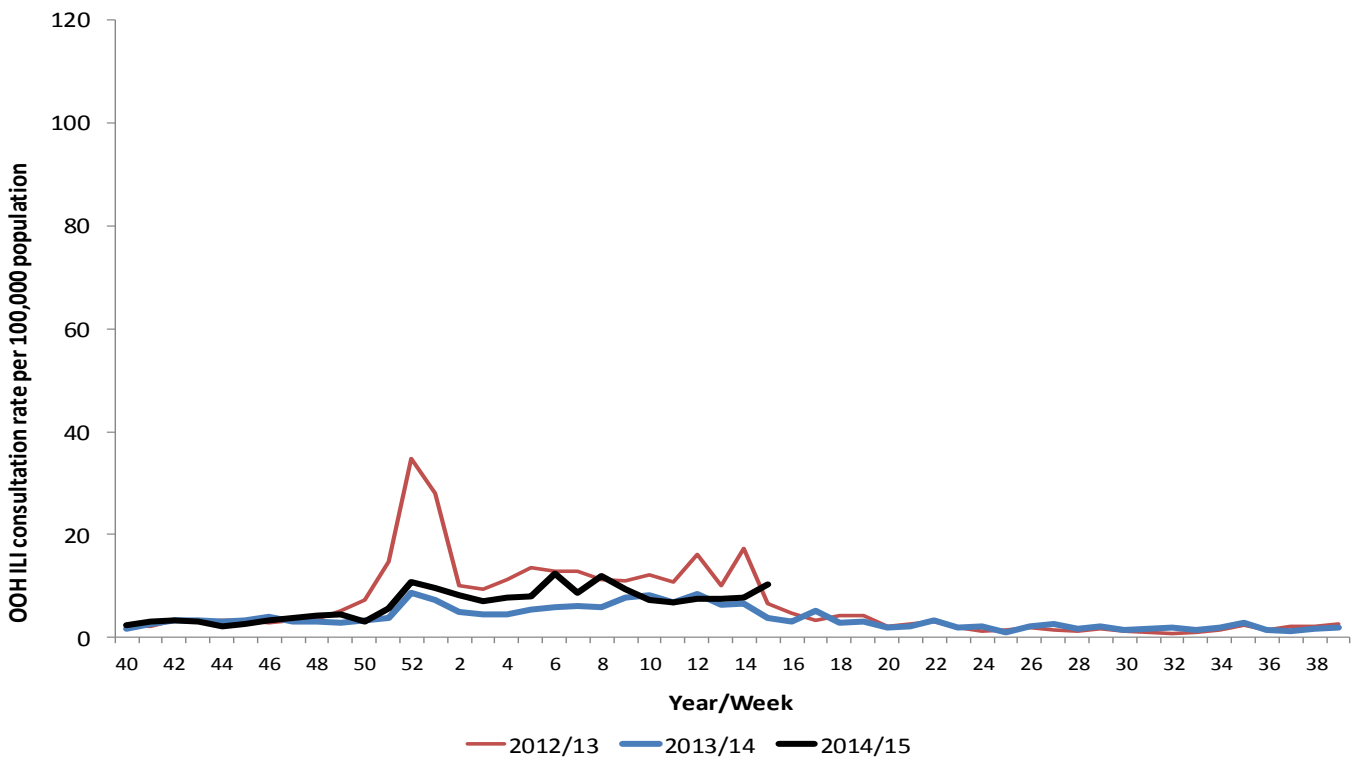
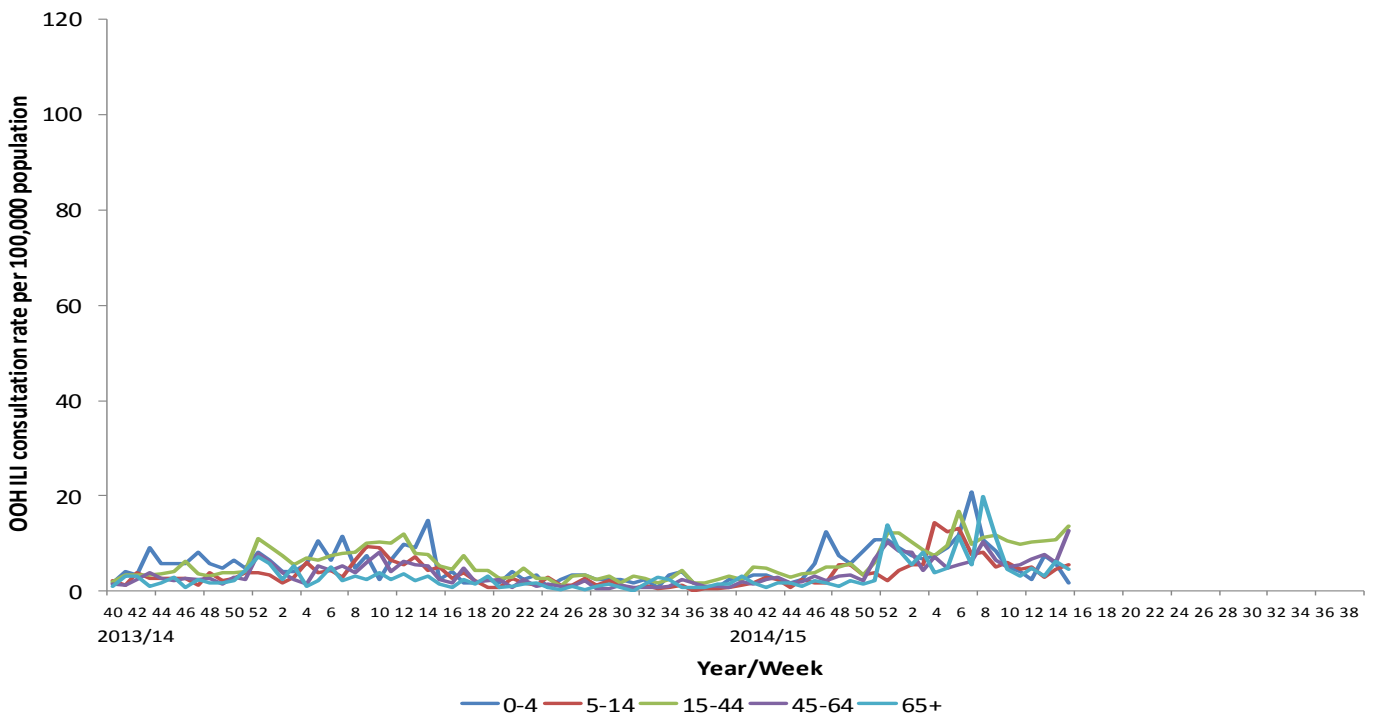


Figure 6. OOH Call rates of flu/FLI by age-group from week 40, 2013



Comment

The OOH consultation rate for flu/FLI has increased further in week 15. Rates in week 15, 2015 have further increased to 10.3 per 100,000 population from 7.8 per 100,000 in week 14, and are higher than the same period in both 2013/14 and 2012/13. It should however be noted that OOH GP consultation rates this week may be affected by the Easter bank holiday period (Figures 5 and 6).

The OOH flu/FLI rate has increased among most age groups in week 15, 2015. The OOH consultation rate for flu/FLI has increased among those aged 5-14, 15-44 and 45-64 years, while rates among those aged 0-4 and 65 years and over have decreased compared to the previous week. Rates among those aged 15-44 years again represent the highest age-specific OOH GP flu/FLI consultation rate this week.

The proportion of OOH total calls has however slightly decreased from 1.2% in week 14 to represent 1.1% of total calls to the OOH service in week 15, 2015.

Virology Data

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

Source	Specimens Tested	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	RSV	Total influenza Positive	% Influenza Positive
Sentinel	1	0	0	0	0	0	0	0%
Non-sentinel	43	0	0	2	3	1	5	12%
Total	44	0	0	2	3	1	5	11%

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

	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	Total Influenza	RSV
0-4	33	2	4	5	44	438
5-14	34	1	0	4	39	27
15-64	144	13	7	37	201	126
65+	240	6	7	26	279	132
Unknown	1	0	0	0	1	1
All ages	452	22	18	72	564	724

Table 3. Cumulative virus activity, Week 40 - Week 15, 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	32	2	4	5	43	438
5-14	7	0	0	0	7	2	27	1	0	4	32	25
15-64	39	3	3	12	57	22	105	10	4	25	144	104
65+	16	1	0	0	17	8	224	5	7	26	262	124
Unknown	0	0	0	0	0	0	1	0	0	0	1	1
All ages	63	4	3	12	82	32	389	18	15	60	482	692

Note

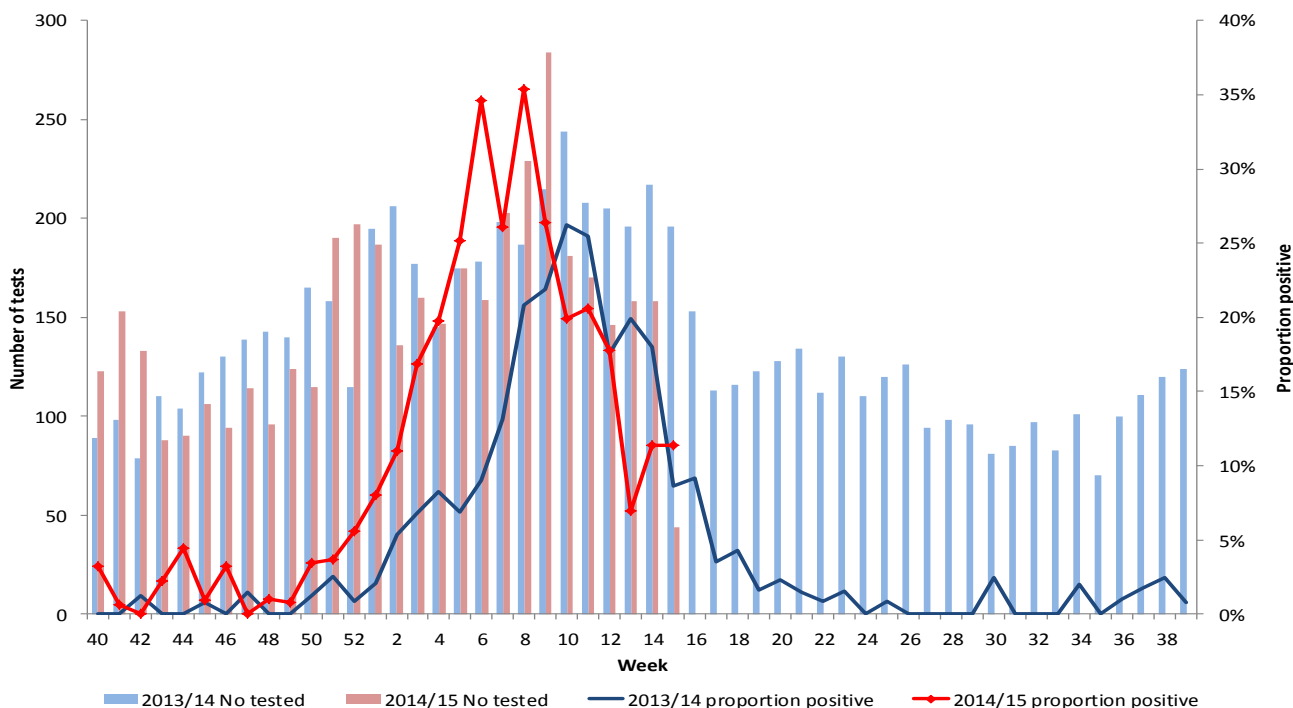
All virology data is provisional. The virology figures for previous weeks included in this or future bulletins are updated with data from laboratory returns received after the production of the last bulletin. The current bulletin reflects the most up-to-date information available.

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

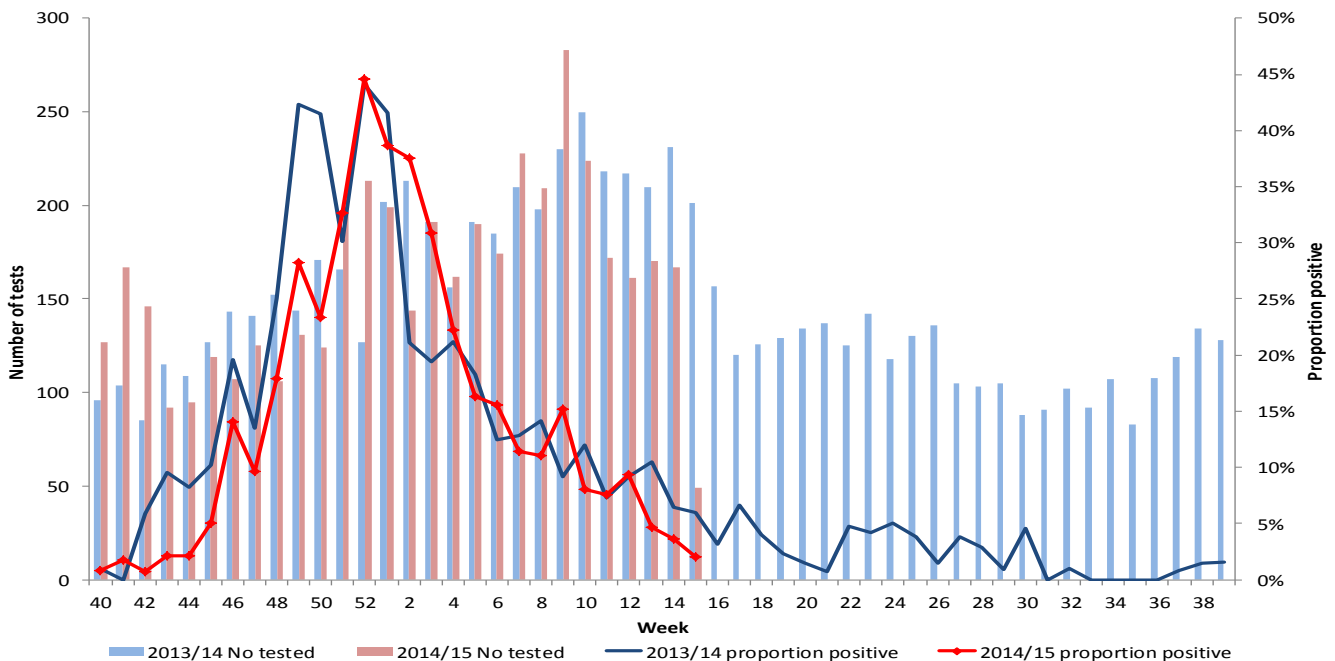
During week 15, 2015 there were 44 specimens submitted for testing, of which 3 were confirmed as influenza B and 2 as influenza A untyped (typing awaited). This is lower than the number detected in week 14 and lower than the number of positive detections during the same period last year. Positivity rates for influenza have however remained stable this week at 11% from the previous week, however data are provisional and more accurate data will be available in the next bulletin. The proportion positive in week 15, 2015 is higher than the same period in 2013/14 but lower than the proportion positive in 2012/13 (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 was 1 RSV positive detection in week 15, 2015 with positivity rates decreasing to 2% from 4% in week 14, 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. The positivity rate is lower than noted during the same period in both 2013/14 and 2012/13. There have been a total of 723 detections of RSV since the beginning of the 2014-15 influenza season of which 60% fall within the 0-4 years age group (Figure 8, Table 2).

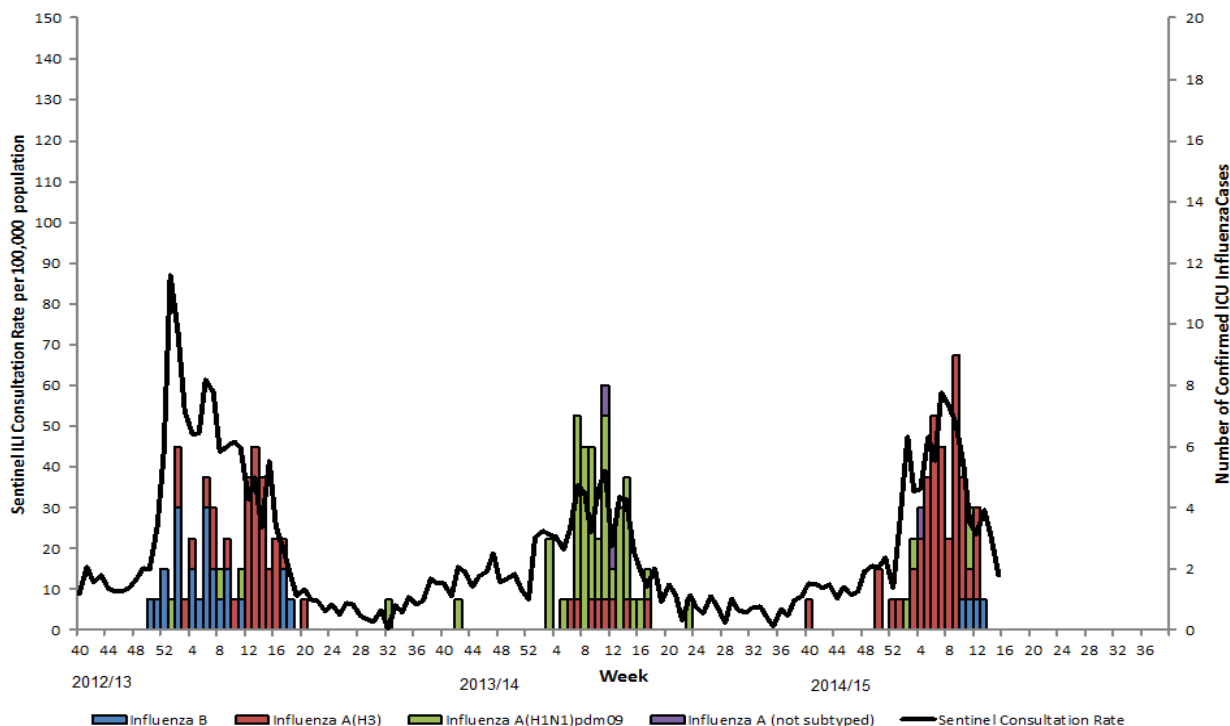
Influenza Vaccine Uptake

To 31st January 2015, provisional data suggested that vaccine uptake for those aged 65 years and over was 71.7%, lower than the same period in last season (73.6%); while 69.0% of those under 65 and in an at risk group had received the vaccine, lower than in the 2013/14 season when 74.4% 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 January 2015, provisional data suggested that vaccine uptake among 2-4 year old children was 53.8%, while provisional uptake among children in P1 – P7 was 79.6%.

ICU/HDU Surveillance

Figure 9. Confirmed ICU influenza cases by week of specimen*, with sentinel ILI consultation rate, 2014-15



Comment

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. *Figure 9 provides an overview of the confirmed flu ICU activity during the 2012/13, 2013/14 and 2014/15 seasons.*

There have been no ICU patients confirmed with influenza since the last bulletin. To date there have been 57 ICU patients with confirmed influenza, of which 48 have been confirmed as influenza A (H3), 4 as influenza A (H1N1)pdm09, 4 as influenza B, and 1 as influenza A untyped (typing awaited) (Figure 9 and table 4).

Up to week 15, 2015, of the 57 ICU patients with confirmed influenza 48 had co-morbidities, were pregnant or were aged over 65, of which provisionally 43 met the criteria for inclusion in an influenza vaccine clinical risk group. To date, 49% (n=21) of those meeting the criteria for inclusion in a clinical risk group are reported to have received the influenza vaccine.

There were no deaths in ICU patients with laboratory confirmed influenza reported since the last bulletin. To date, there have been nine deaths in ICU patients with laboratory confirmed influenza.

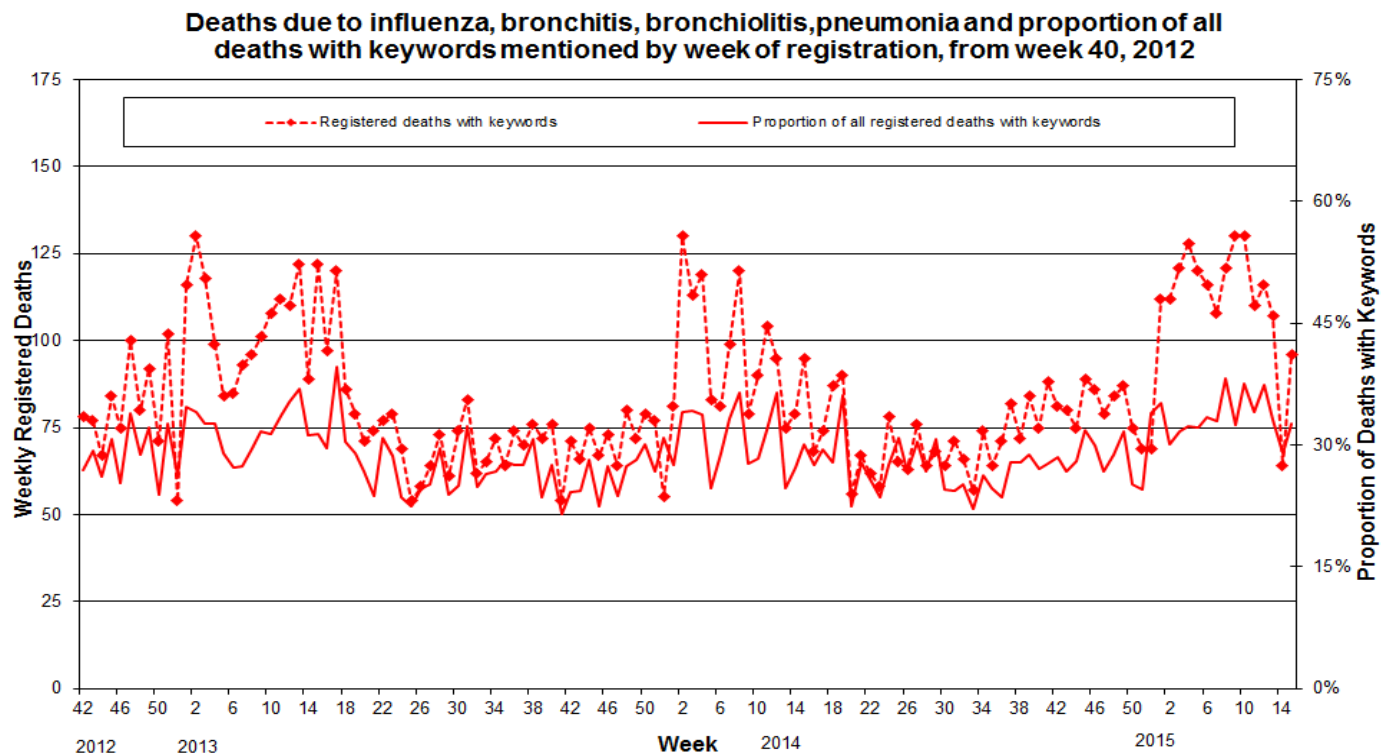
Outbreak Surveillance

There were no new confirmed influenza outbreaks reported in week 15, 2015. There have been a total of 28 confirmed influenza outbreaks reported so far this season, of which 26 have been confirmed as influenza A (H3) and 2 as influenza B. This compares with a total of three outbreaks for the duration of the 2013/14 season.

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 to 33% in week 15, 2015 from 29% in week 14. In week 15 there were 294 registered deaths of which 96 related to the specific respiratory infections.

EuroMOMO

EuroMOMO reported no overall all-cause excess mortality in week 15. Significant excess mortality has been reported in weeks 3, 4, 8 and 9 this season. This data is provisional due to the time delay in registration; numbers may vary from week to week.

International Summary

Europe

Week 14, 2015:

Influenza activity continued to decrease in most reporting countries, although the proportion of influenza-virus-positive specimens remained high (36%). Since week 51/2014 (for 15 weeks) the positivity rate has been over the threshold of 10% indicating seasonal influenza activity.

- Influenza A(H1N1)pdm09, A(H3N2) and type B viruses continued to circulate in the WHO European Region, but type B viruses accounted for 77% of sentinel detections for week 14/2015.
- The number of hospitalised influenza cases is returning to low levels..
- Excess all-cause mortality among people aged 65 years and above, which was concomitant with increased influenza activity and the predominance of A(H3N2) viruses and had been observed in most countries participating in the European project for monitoring excess mortality for public health action (EuroMOMO) appears to have ended (see the EuroMOMO website).
- About two thirds of the A(H3N2) viruses characterized to date show evidence of antigenic differences from the virus included in the 2014–2015 northern hemisphere influenza vaccine. These differences may have contributed to the observed reduction in effectiveness of the A(H3N2) component of the vaccine and to the excess mortality reported among older age groups. The A(H1N1)pdm09 and B components of the vaccine are likely to be effective.
- Three A(H3N2) viruses have shown reduced susceptibility to the neuraminidase inhibitor oseltamivir and one A(H3N2) virus has shown it to oseltamivir and zanamivir. There are no indications of reduced susceptibility of influenza A(H1N1)pdm09 and type B viruses to the neuraminidase inhibitors oseltamivir and zanamivir.

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

Worldwide (WHO) and CDC

As at 6th April 2015:

Globally, influenza activity decreased further but remained above the seasonal threshold in the northern hemisphere. While influenza A(H3N2) viruses predominated this season, the proportions of influenza B and influenza A(H1N1)pdm09 detections increased in the last few weeks.

- In North America, influenza activity continued to decrease but remained slightly above the threshold while the proportion influenza B detections increased. During week 13 (March 29-April 4, 2015), influenza activity continued to decrease in the United States. Of 10,684 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 13, 1,138 (10.7%) were positive for influenza. Outpatient Illness Surveillance: The proportion of outpatient visits for influenza-like illness (ILI) was 1.8%, which is below the national baseline of 2.0%. Five regions reported ILI at or above region-specific baseline levels.
- In Europe, influenza activity continued to decline in most countries. Influenza A(H3N2)virus continued to predominate this season, but there was an increase in the proportion of influenza B detections in many countries.
- In northern Africa and the Middle East, influenza activity decreased in most of the region. Influenza A(H1N1)pdm09 remained predominant in the region.
- In western Asia, influenza activity decreased in most countries in the region. But influenza detections have increased in Turkey with influenza B and influenza A(H1N1)pdm09 co-circulating.
- In the temperate countries of Asia, influenza activity continued to decrease in most of the region, but increased in the Republic of Korea. In north China, influenza B activity increased, while the peak of influenza activity occurred in the beginning of the year.
- In tropical countries of the Americas, influenza activity was reported to increase slightly in most countries. Colombia, Ecuador, Jamaica, and Puerto Rico reported increased influenza-like illness (ILI), with detections of respiratory syncytial virus (RSV) and influenza virus.
- In tropical Asia, influenza activity remained high and influenza A(H1N1)pdm09 predominated in India and Bhutan. Influenza activity with influenza A(H3N2) and B continued to decrease from its peak in southern China and China Hong Kong Special Administrative Region.
- In the southern hemisphere, influenza activity remained at inter-seasonal levels.
- Based on FluNet reporting (as of 2 April 2015 14:15 UTC), National Influenza Centres (NICs) and other national influenza laboratories from 88 countries, areas or territories reported data for the time period from 8 March 2015 to 21 March 2015. The WHO GISRS laboratories tested more than 87 715 specimens. 17 828 were positive for influenza viruses, of which 9119 (51.1%) were typed as influenza A and 8707 (48.9%) as influenza B. Of the sub-typed influenza A viruses, 2558 (49.8%) were influenza A(H1N1)pdm09 and 2579 (50.2%) were influenza A(H3N2). Of the characterized B viruses, 427 (97.7%) belonged to the B-Yamagata lineage and 10 (2.3%) to the B-Victoria lineage.

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

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

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/>

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