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Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 10 (02 March 2015 – 08 March 2015)

Summary

- GP Influenza activity in Northern Ireland has decreased further however most indicators remain at a moderate level.
- GP consultation rates for combined flu and flu-like illness (flu/FLI) have decreased in week 10, 2015, and remain below the pre-epidemic Northern Ireland threshold of 52.0 per 100,000 population at 40.7 per 100,000 population. Some indicators remain higher than noted during the same period last year.
- The OOH consultation rate for flu/FLI has decreased but remains moderate in week 10 at 7.3 per 100,000 population. The rate also remained relatively low in most age groups with the highest rate noted among those aged 15-44 years.
- RSV activity has decreased in week 10, 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 nine new admissions to ICU with confirmed influenza reported since the last bulletin; there have been a total of 43 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 seven deaths in ICU patients with laboratory confirmed influenza this season to date.
- There was one new confirmed influenza outbreak reported to PHA in week 10, 2015.
- In week 10 2015, no significant all-cause excess mortality was reported through the EuroMOMO algorithm.
- In week 10, 2015 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 5 emergency departments in Northern Ireland.

Sentinel GP Consultation Data

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

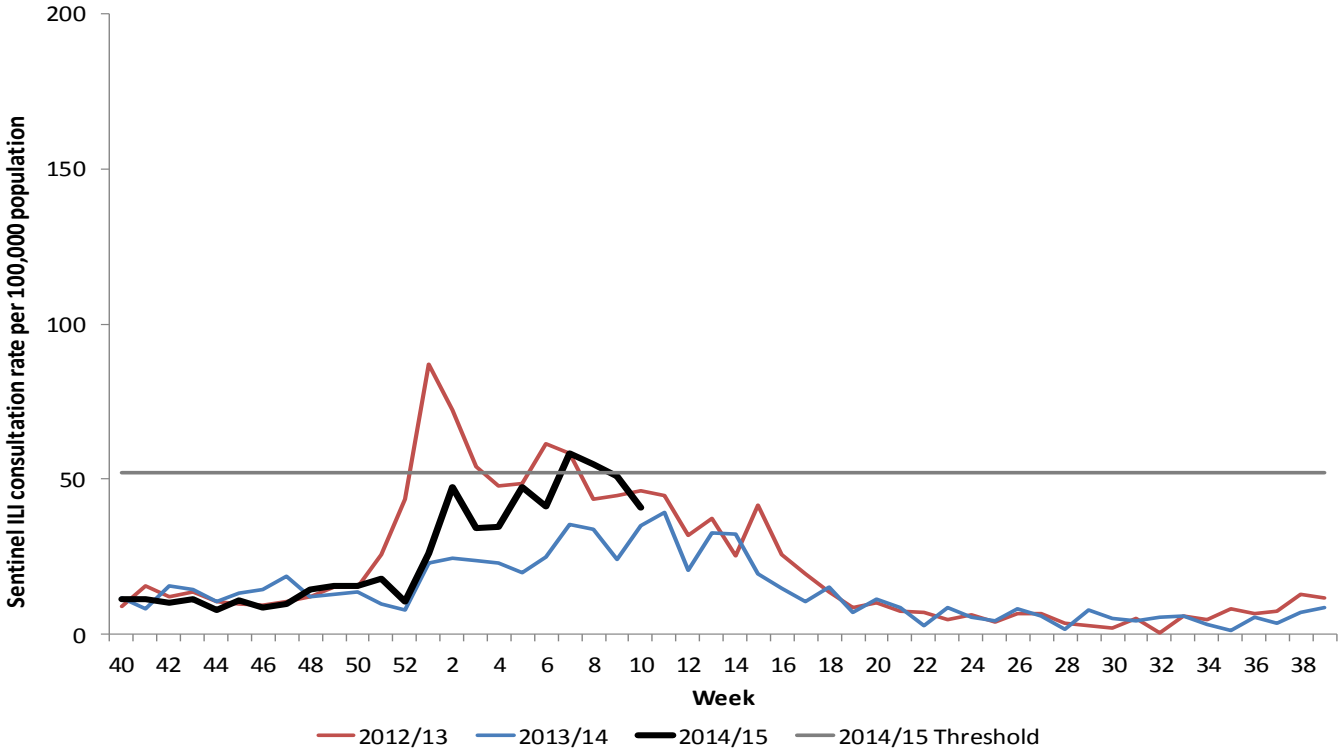


Figure 2. Sentinel GP combined consultation rates for flu/FLI and number of influenza positive detections 2009/10 – 2014/15

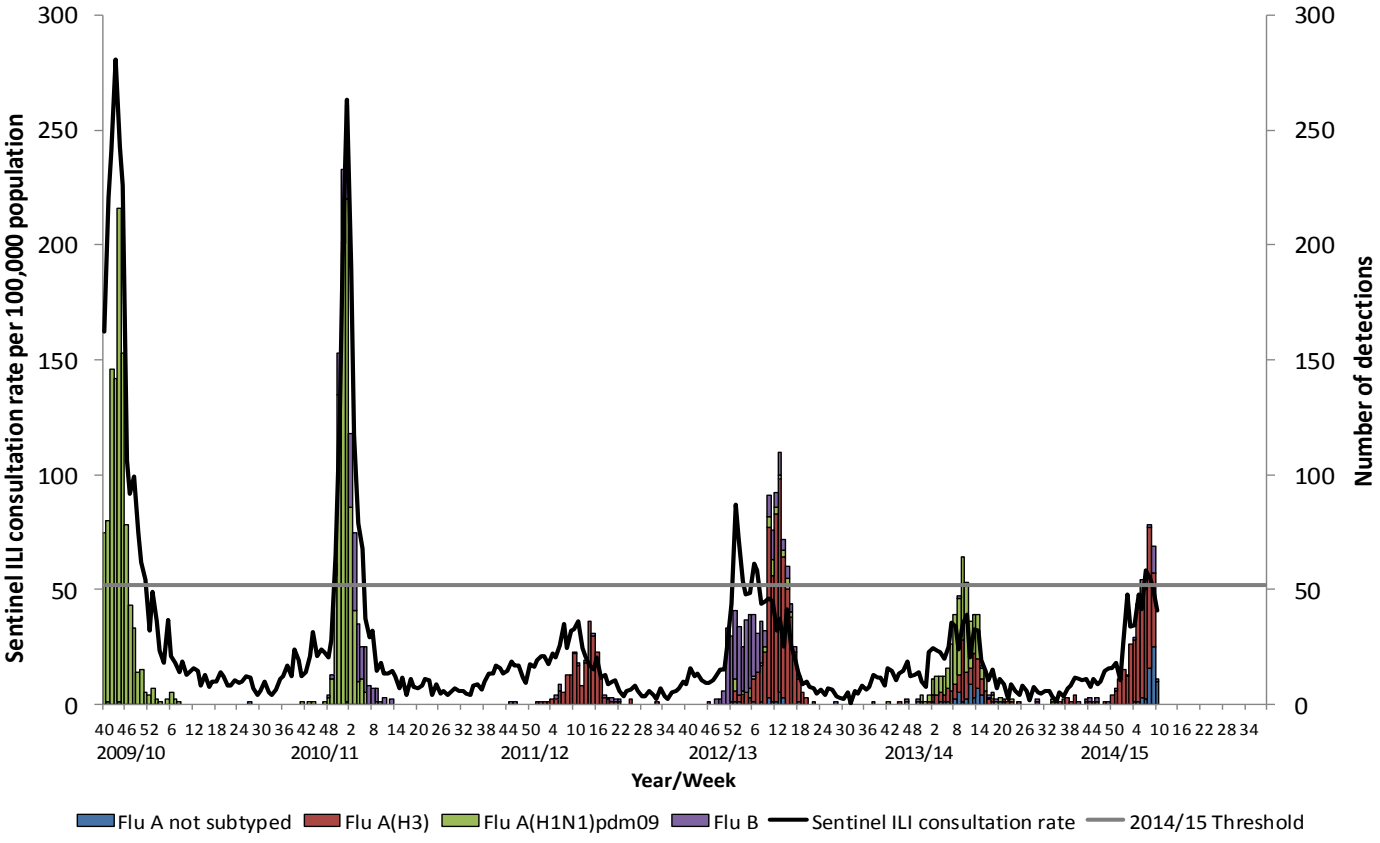
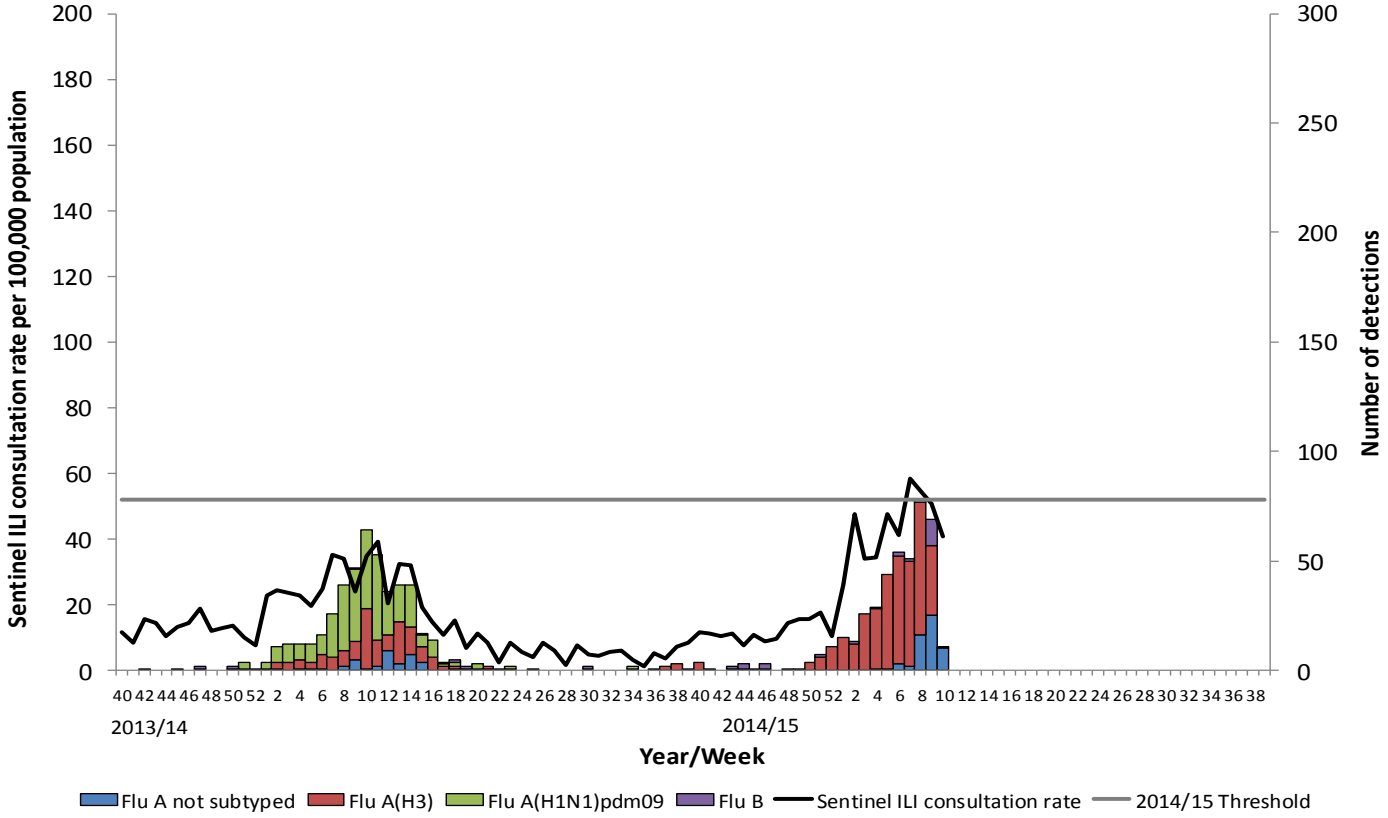


Figure 3. Sentinel GP consultation rates for flu/FLI and number of virology 'flu detections from week 40, 2013

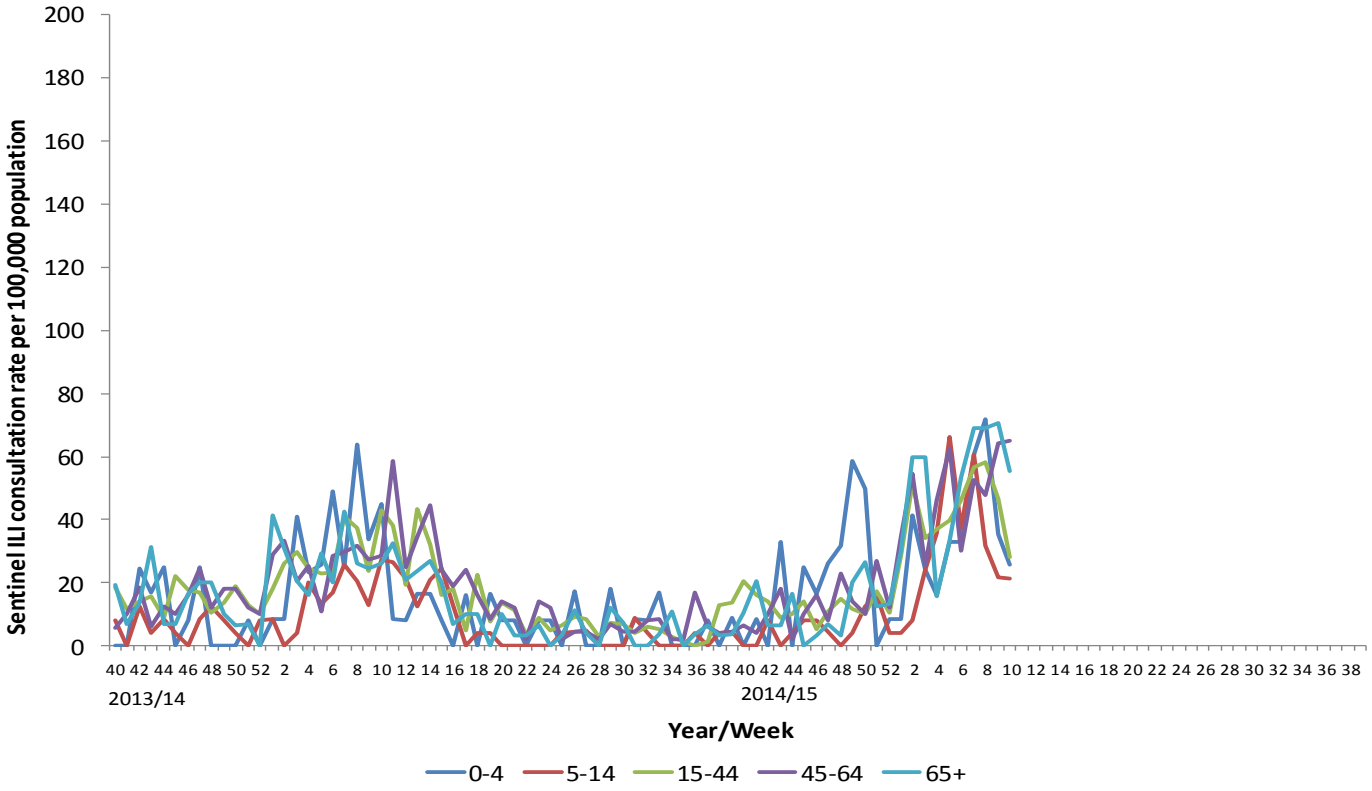


Comment

GP consultation rates have continued to decrease in week 10 to 40.7 per 100,000 from 51.0 per 100,000 in week 9, 2015 and have fallen further below the pre-epidemic Northern Ireland 2014/15 threshold of 52.0 per 100,000.

GP Flu/FLI consultations in week 10, 2015 are however higher than noted during the same period last year but lower than the same period in 2012/13 (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 almost all age groups in week 10, 2015.

In week 10, GP Flu/FLI consultation rates for combined flu' and flu'-like-illness increased only among those aged 45-64 years to 65.0 from 64.1 the previous week; again representing the highest rate noted among this age group since 2012/13. Rates among all other age groups have decreased in week 10, while those aged 45-64 years represent the highest age-specific consultation rate this week.

In generally age-specific GP flu/FLI consultations have begun to decrease in recent weeks while remaining higher than noted earlier in the season, with fluctuations in rates noted only among the eldest age groups (Figure 4).

Out-of-Hours (OOH) Centres Call Data

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

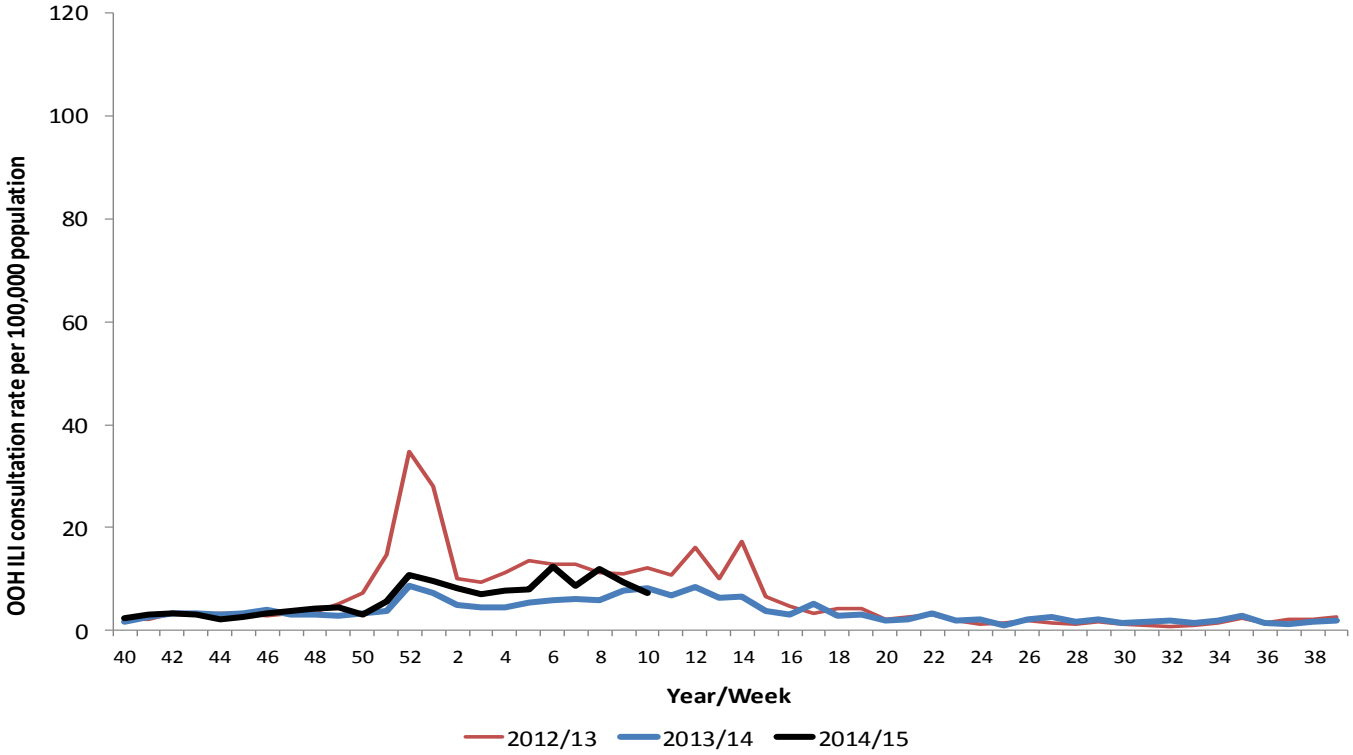
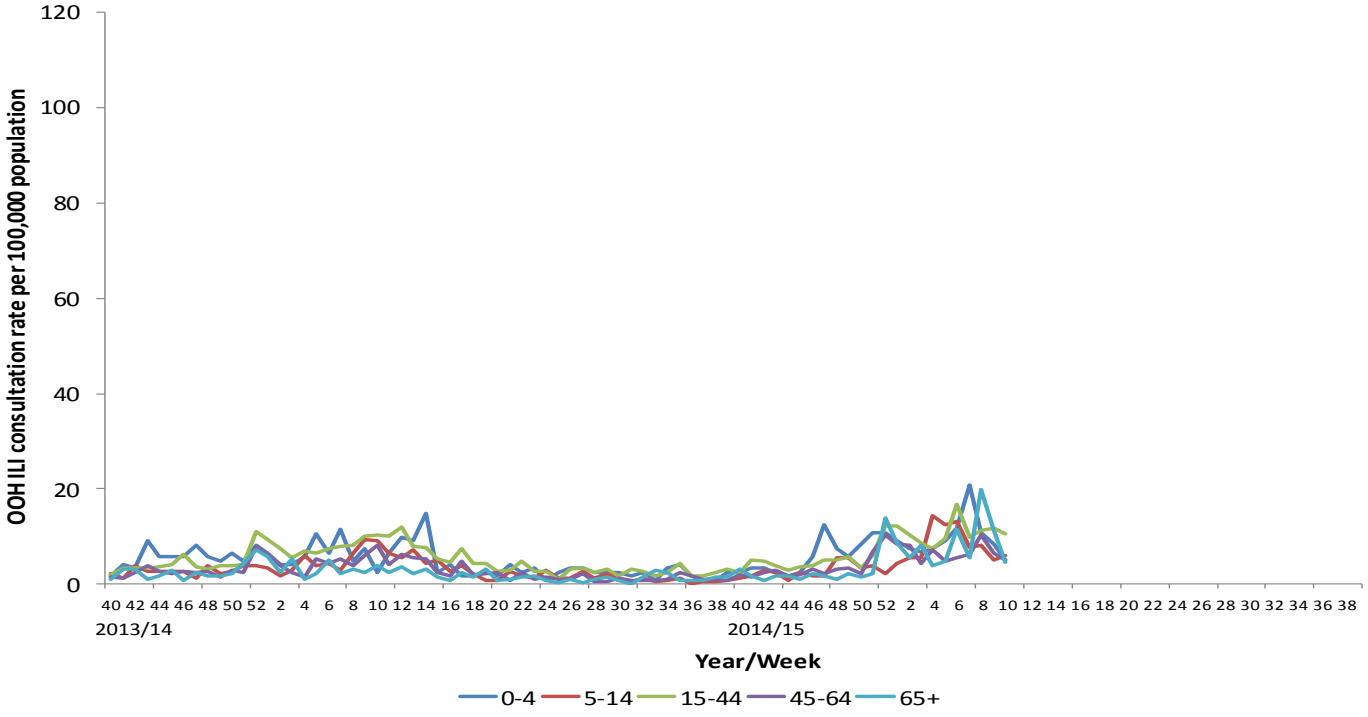


Figure 6. OOH Call rates of flu/FLI by age-group from week 40, 2013



Comment

The OOH consultation rate for flu/FLI has further decreased in week 10. Rates in week 10, 2015 have decreased to 7.3 per 100,000 population from 9.3 per 100,000 in week 9, and are lower than the same period in both 2013/14 and 2012/13 (Figures 5 and 6).

The OOH flu/FLI rate has decreased among almost all age groups in week 10, 2015. The OOH consultation rate for flu/FLI increased slightly among those aged 5-14 years to 6.0 per 100,000 population from 5.1 per 100,000 population the previous week, while decreases were noted among all other age groups. 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 further decreased from 1.7% in week 9 to represent 1.3% of total calls to the OOH service in week 10, 2015.

Virology Data

Table 1. Virus activity in Northern Ireland, Week 10, 2014/15

Source	Specimens Tested	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	RSV	Total influenza Positive	% Influenza Positive
Sentinel	10	0	0	2	1	1	3	30%
Non-sentinel	76	0	0	8	0	9	8	11%
Total	86	0	0	10	1	10	11	13%

Table 2. Cumulative virus activity in Northern Ireland, Week 40 - 10, 2014/15

	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	Total Influenza	RSV
0-4	28	1	4	3	36	410
5-14	29	1	1	2	33	26
15-64	111	3	19	12	145	115
65+	174	6	34	11	225	119
Unknown	0	0	0	0	0	1
All ages	342	11	58	28	439	671

Table 3. Cumulative virus activity, Week 40 - Week 10, 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	27	1	4	3	35	410
5-14	6	0	0	0	6	2	23	1	1	2	27	24
15-64	32	1	6	5	44	20	79	2	13	7	101	95
65+	12	1	3	0	16	7	162	5	31	11	209	112
Unknown	0	0	0	0	0	0	0	0	0	0	0	1
All ages	51	2	9	5	67	29	291	9	49	23	372	642

Note

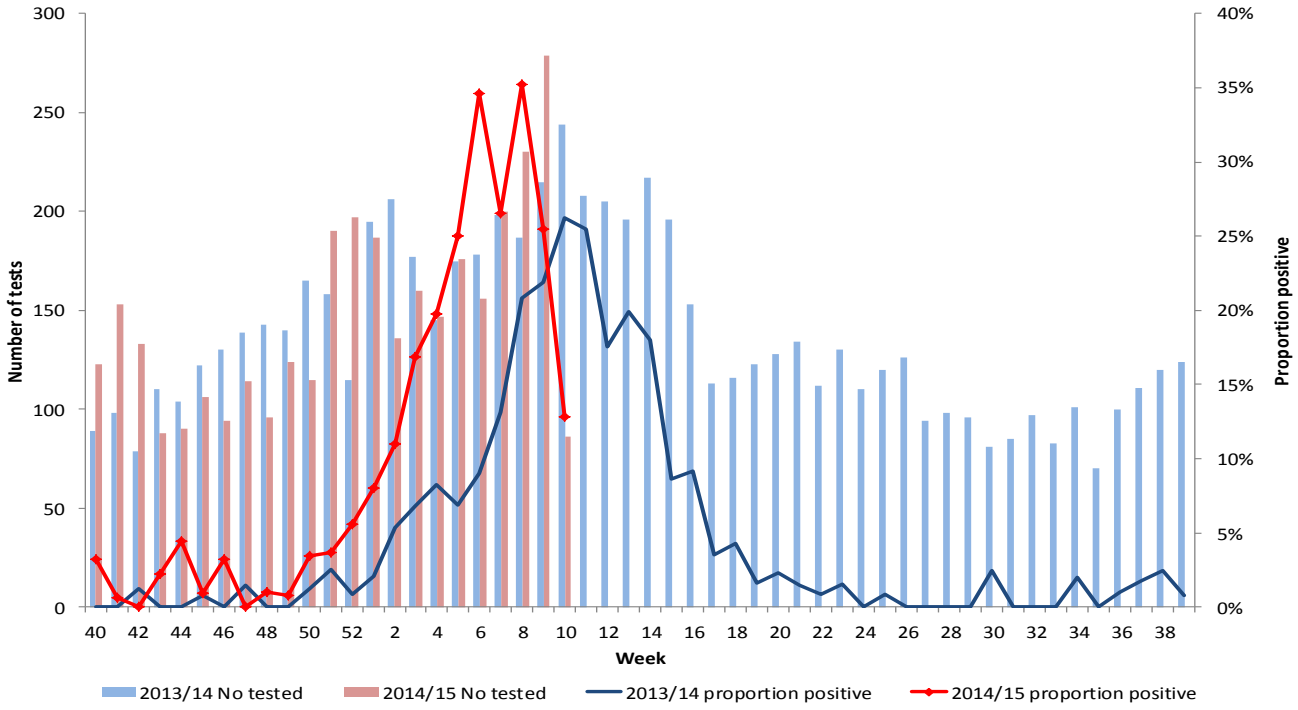
All virology data is provisional. The virology figures for previous weeks included in this or future bulletins are updated with data from laboratory returns received after the production of the last bulletin. The current bulletin reflects the most up-to-date information available.

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

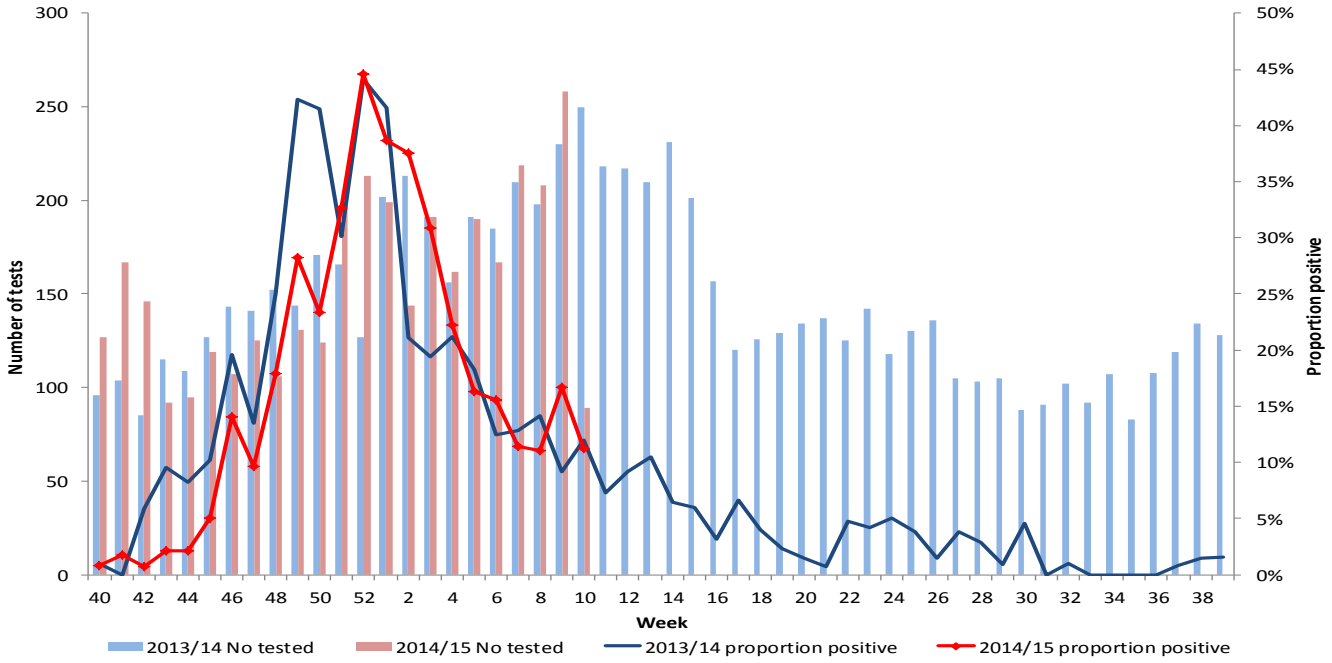
During week 10, 2015 there were 86 specimens submitted for testing, of which 10 were confirmed as influenza A untyped (typing awaited) and 1 as influenza B. This is much lower than the number detected in week 9 and also lower than the number of positive detections during the same period last year. Positivity rates for influenza have again decreased this week to 13% from 25% the previous week, however data are provisional and more accurate data will be available in the next bulletin. The proportion positive in week 10, 2015 is lower than the same period in both 2013/14 and 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 were 10 RSV positive detections in week 10, 2015 with positivity rates decreasing to 11% from 17% in week 9, 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 2013/14 but higher than in 2012/13. There have been a total of 671 detections of RSV since the beginning of the 2014-15 influenza season of which 61% 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.

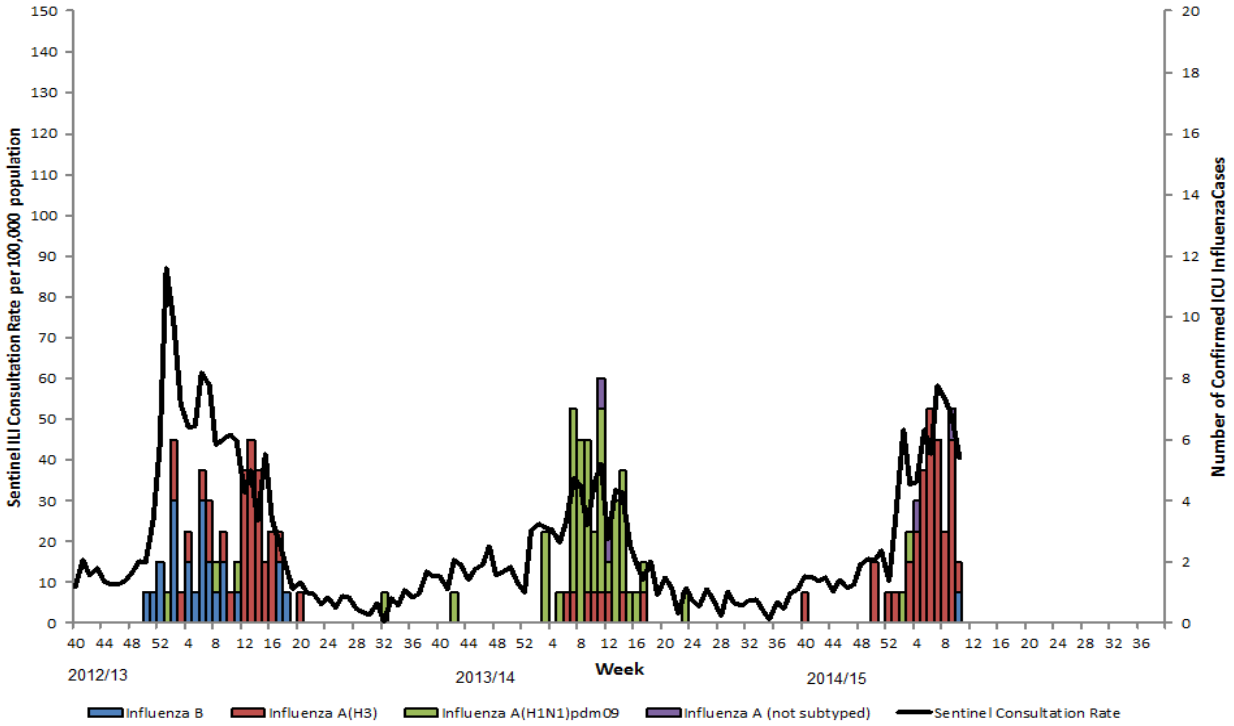
This season for the first time, all children aged between 2 and 4 years and all those in P1 – P7 have been offered the seasonal influenza vaccine. To 31st January 2015, provisional data suggested that vaccine uptake among 2-4 year old children was 53.8%, while provisional uptake among children in P1 – P7 was 79.6%.

Emergency Department Syndromic Surveillance System

In week 10, 2015 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

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 nine ICU patients confirmed with influenza since the last bulletin. To date there have been 43 ICU patients with confirmed influenza, of which 38 have been confirmed as influenza A (H3), two as influenza A (H1N1)pdm09, one as influenza B, and two as influenza A untyped (typing awaited) (Figure 9 and table 4).

Up to week 10, 2015, of the 43 ICU patients with confirmed influenza 36 had co-morbidities, were pregnant or were aged over 65, of which provisionally 32 met the criteria for inclusion in an influenza vaccine clinical risk group. To date, 56% (n=18) 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 seven deaths in ICU patients with laboratory confirmed influenza.

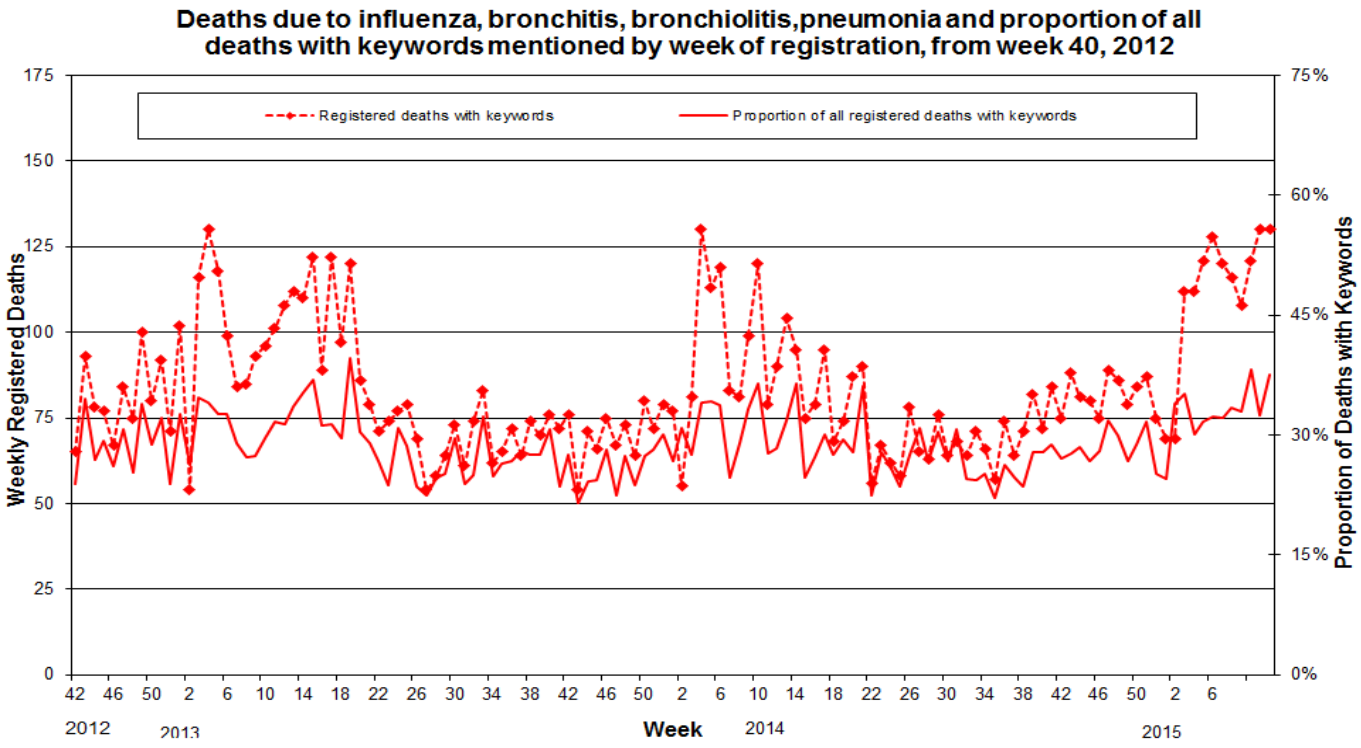
Outbreak Surveillance

There was one new confirmed influenza outbreak reported in week 10, 2015. There have been a total of 27 confirmed influenza outbreaks reported so far this season, of which 20 have been confirmed as influenza A (H3), two as influenza B and five as influenza A untyped (typing awaited). 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 38% in week 10, 2015 from 32% in week 9. In week 10, 2015, there were 346 registered deaths of which 130 related to these specific respiratory infections.

EuroMOMO

No significant excess all-cause mortality was reported in week 10 in Northern Ireland. Significant excess mortality has been reported in weeks 3, 4 and 8 this season. This data is provisional due to the time delay in registration; numbers may vary from week to week.

International Summary

Europe

Week 9, 2015:

Influenza activity continues to increase in eastern and central countries of the WHO European Region, but is decreasing in western countries.

- Since week 40/2014, 18 countries have experienced higher than usual levels of influenza activity during this season.
- Since week 04/2015, the proportion of influenza virus detections in sentinel specimens has been about 50%, which is typically seen during peaks of the influenza season. Influenza A(H1N1)pdm09, A(H3N2) and type B viruses continued to circulate in the Region, with A(H3N2) predominating, despite increasing detections of type B viruses.
- Excess all-cause mortality among people aged ≥65 years, concomitant with increased influenza activity and the predominance of A(H3N2) viruses, has been observed since the beginning of the year in Belgium, Denmark, France, the Netherlands, Portugal, Spain, Switzerland and the United Kingdom (see EuroMOMO).
- Most of the A(H3N2) viruses characterized so far show antigenic differences compared to the virus included in the 2014–2015 northern hemisphere influenza vaccine. The observed reduced effectiveness of the A(H3N2) component of the vaccine might have contributed to the excess mortality reported among elderly people. The A(H1N1)pdm09 and B components of the vaccine are likely to be effective.
- The circulation of respiratory syncytial virus (RSV) has decreased to low levels across the European Region.

http://www.flunewseurope.org/

Worldwide (WHO) and CDC

As at 9th March 2015:

Globally, influenza activity remained high in the northern hemisphere with influenza A(H3N2) viruses predominating. Some countries in Africa, Asia and southern part of Europe reported an increased influenza A(H1N1)pdm09 activity.

- In North America, the influenza activity remained elevated following the influenza peak. Influenza A(H3N2) remained the dominant virus detected this season. During week 8 (February 22-28, 2015), influenza activity continued to decrease, but remained elevated in the United States. Of 16,821 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 8, 1,834 (10.9%) were positive for influenza. Outpatient Illness Surveillance: The proportion of outpatient visits for influenza-like illness (ILI) was 2.5%, above the national baseline of 2.0%. Seven regions reported ILI at or above region-specific baseline levels.
- In Europe, the influenza season was at its height, particularly in central and western countries. Influenza A(H3N2) virus continued to predominate this season.
- In northern Africa and the middle East, influenza activity was decreasing in most of the region. Influenza A was predominant in the region.
- In the temperate countries of Asia, influenza activity decreased from its peak in northern China and Mongolia, but continued to increase in the Republic of Korea. Influenza A(H3N2) virus predominated.
- In tropical countries of the Americas, influenza activity remained low in most countries.
- In tropical Asia, influenza activity continued to increase in India and Lao People's Democratic Republic. Influenza activity remained high in southern China, China Hong Kong Special Administrative Region, and the Islamic Republic of Iran.
- In the southern hemisphere, influenza activity continued at inter-seasonal levels.
- The vaccine recommendation for the 2015-2016 northern hemisphere winter season was made and can be consulted at the link below:
- Based on FluNet reporting (as of 5 March 2015 16:25 UTC), during weeks 6 to 7 (8 February 2015 to 21/02/2015), National Influenza Centres (NICs) and other national influenza laboratories from 89 countries, areas or territories reported data for the time period from 8 to 21 February 2015. The WHO GISRS laboratories tested more than 133 895 specimens. 34 056 were positive for influenza viruses, of which 25 455 (74.7%) were typed as influenza A and 8601 (25.3%) as influenza B. Of the sub-typed seasonal influenza A viruses, 2382 (20.5%) were influenza A(H1N1)pdm09 and 9253 (79.5%) were influenza A(H3N2). Of the characterized B viruses, 1656 (97.1%) belonged to the B-Yamagata lineage and 49 (2.9%) 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/

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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