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Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 2 (05 January 2015 – 11 January 2015)

Summary

- Influenza activity in Northern Ireland has increased and most indicators are at the highest level seen this season.
- GP consultation rates for combined flu and flu-like illness (flu/FLI) have increased but remain slightly below the updated pre-epidemic Northern Ireland threshold of 52.0 per 100,000 population at 47.6 per 100,000 population in week 2, 2015 with most indicators higher than noted during the same period last year.
- The OOH consultation rate for flu/FLI has decreased and remained low in week 2 at 8.2 per 100,000 population. The rate also remained relatively low in all age groups with the highest rate again noted among the 15-44 years age group.
- RSV activity has increased in week 2, 2015.
- Influenza vaccine uptake to 30th November 2014 was 67.5% for those aged 65 and over, 61.7% for those aged under 65 and in an at risk group, 49.7% among 2-4 year old children and 78.9% among children in P1 to P7.
- There was one new admission to ICU with confirmed influenza reported since the last bulletin; there have been a total of 6 ICU patients with confirmed influenza this season to date.
- There were no deaths in ICU patients with laboratory confirmed influenza reported in week 2, 2015; there have been 2 deaths in ICU patients with laboratory confirmed influenza this season to date.
- There were no new confirmed influenza outbreaks reported to PHA in week 2, 2015.
- In weeks 51, 2014 to week 2, 2015 EuroMOMO reported no excess mortality.
- In week 2, 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 4 emergency departments in Northern Ireland.

Sentinel GP Consultation Data

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

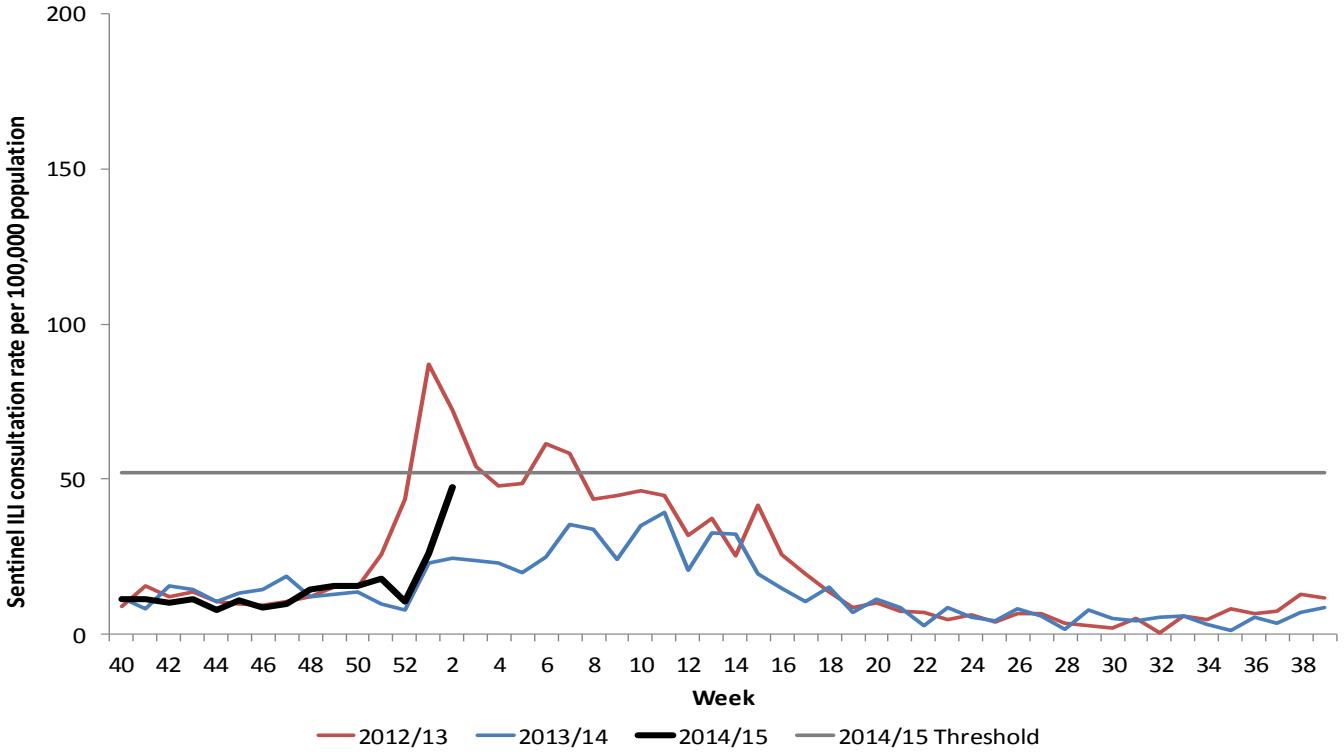


Figure 2. Sentinel GP combined consultation rates for flu/FLI and number of influenza positive detections 2009/10 – 2014/15

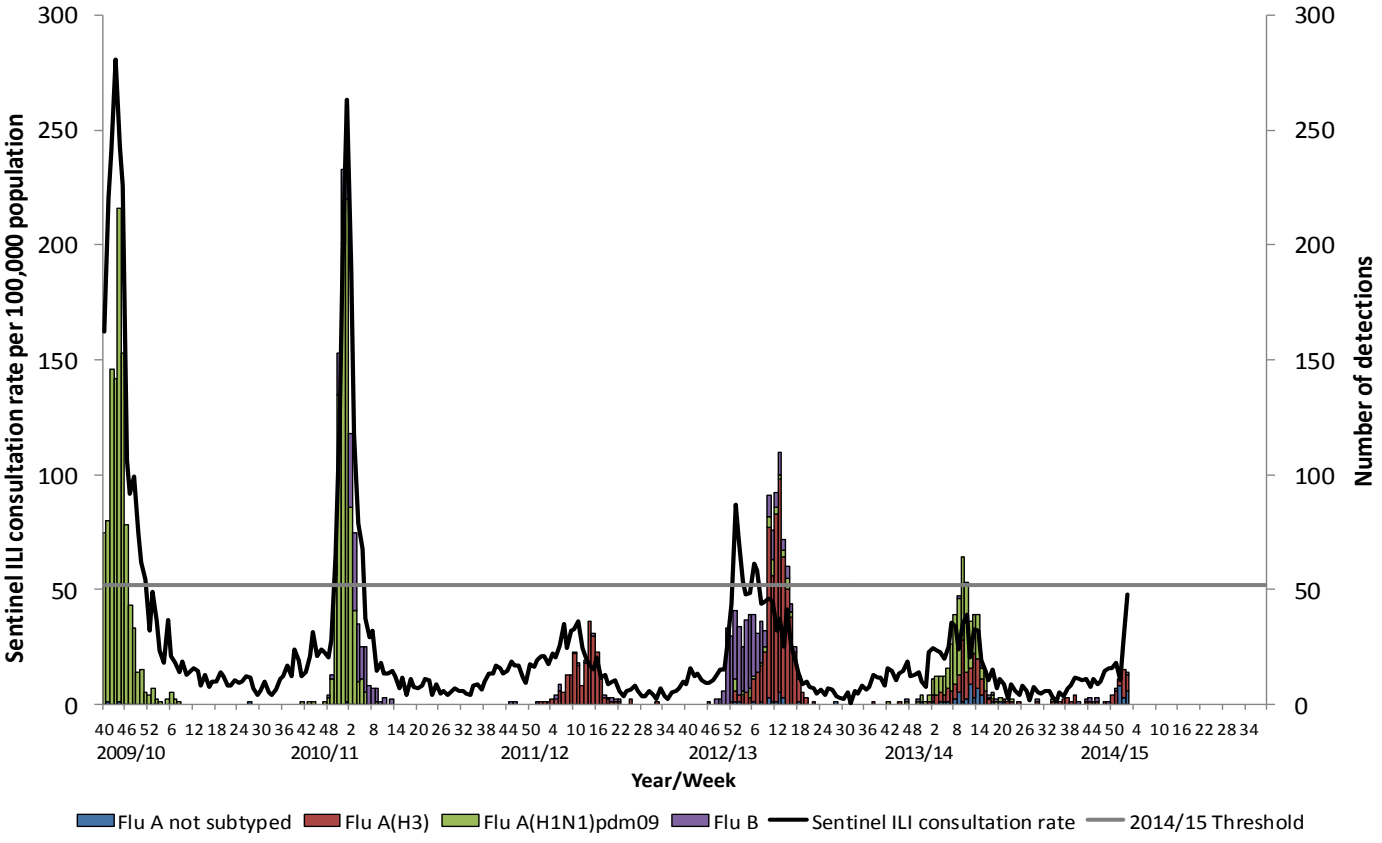
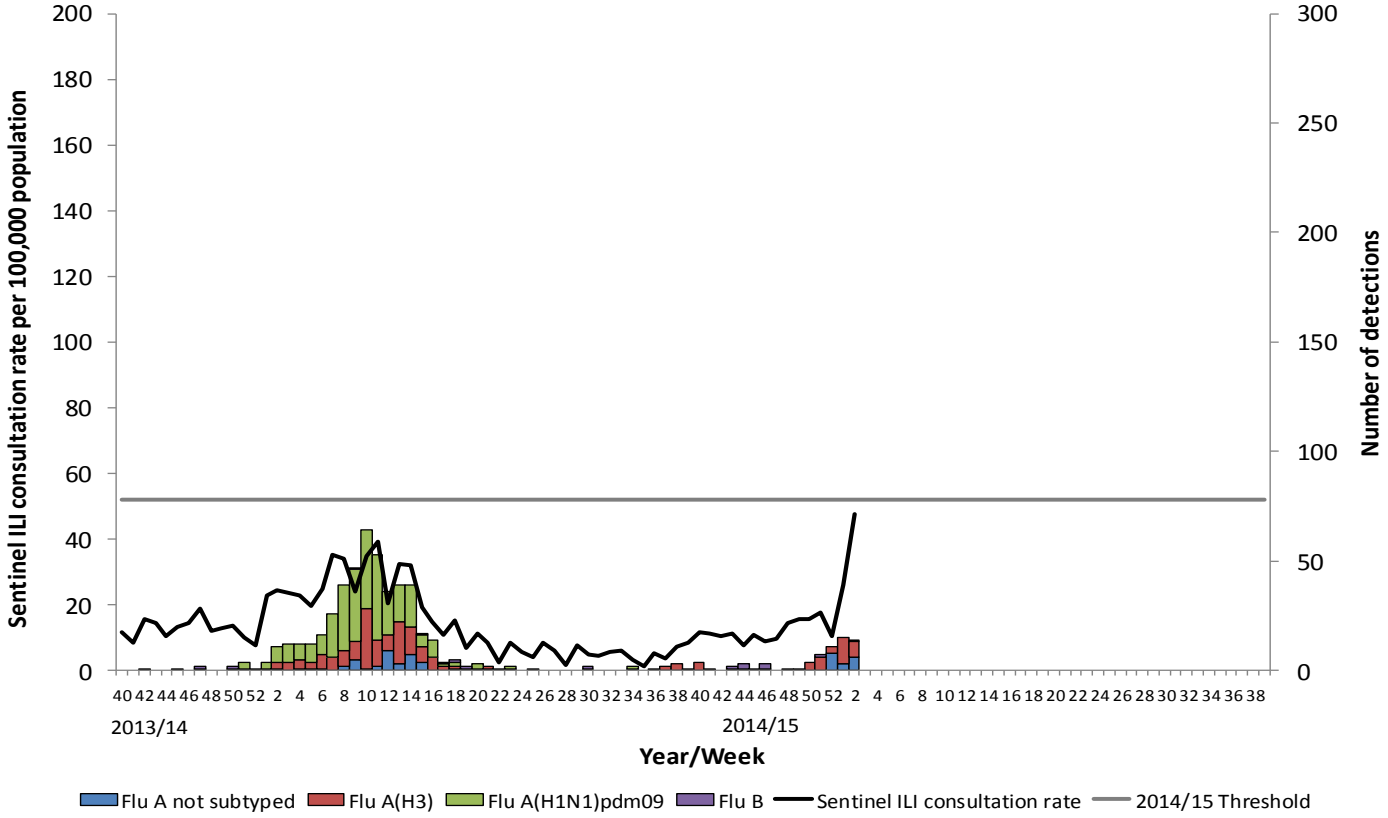


Figure 3. Sentinel GP consultation rates for flu/FLI and number of virology 'flu detections from week 40, 2013

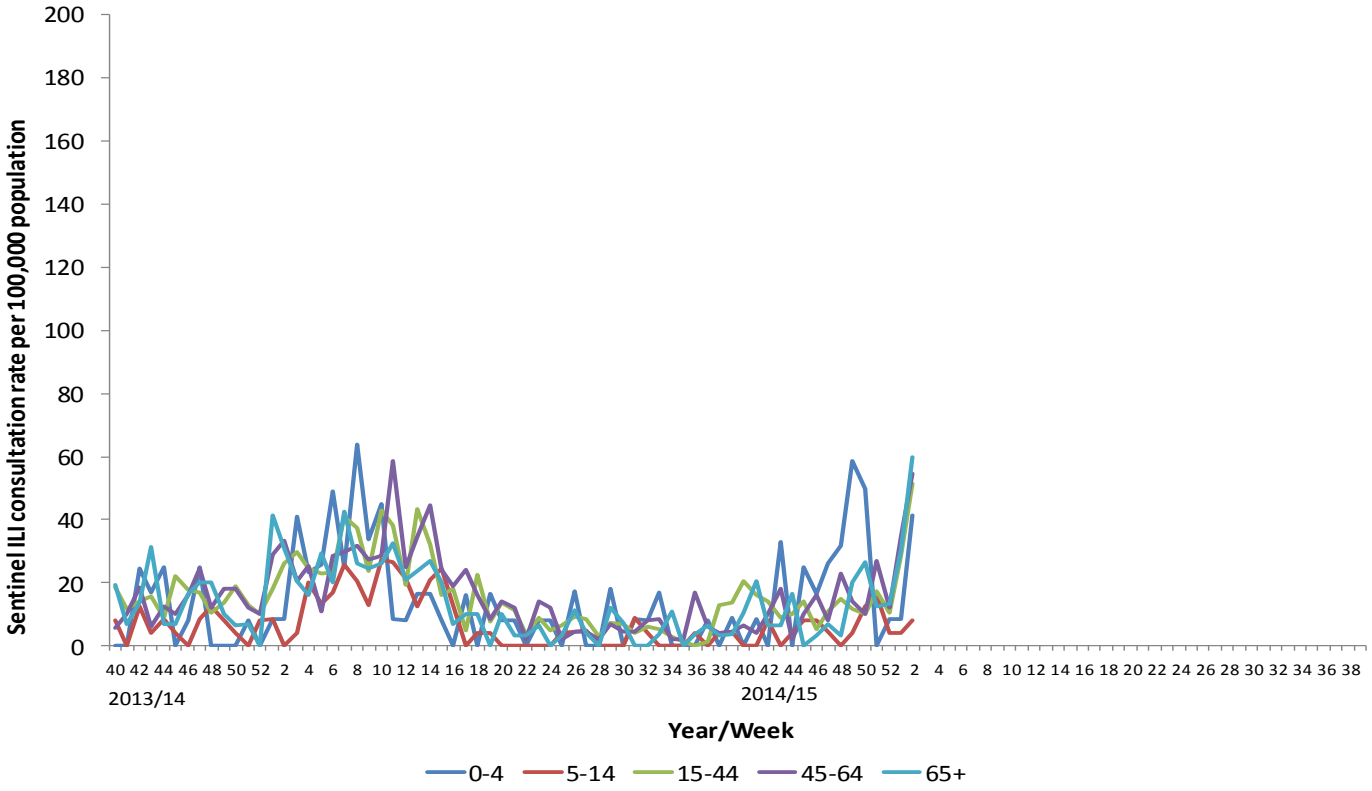


Comment

GP consultation rates have markedly increased in week 2 to 47.6 per 100,000 from 26.1 per 100,000 in week 1, 2015. GP consultation rates in week 2, 2015 represent the highest GP Flu/FLI consultation rate this season to date and are much higher than noted during the same period last season, although lower than noted during the same period in 2012/13.

Rates remain slightly 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

Sentinel GP flu/FLI consultations have increased for all age groups in week 2, 2015.

In week 2, an increase in consultation rates were noted among all age groups when compared with the previous week, with rates among those aged 0-4 years increasing markedly. Please note however that small numbers may have contributed to fluctuations in rates.

In general, GP consultation rates for combined flu' and flu'-like-illness in most age groups have increased in recent weeks, with rates among the 0-4 years age group again rising to become comparable with the higher rates noted earlier in the season. Rates among those aged 65 years and over represented the highest age-specific consultation rate in week 2, 2015 (Figure 4).

Out-of-Hours (OOH) Centres Call Data

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

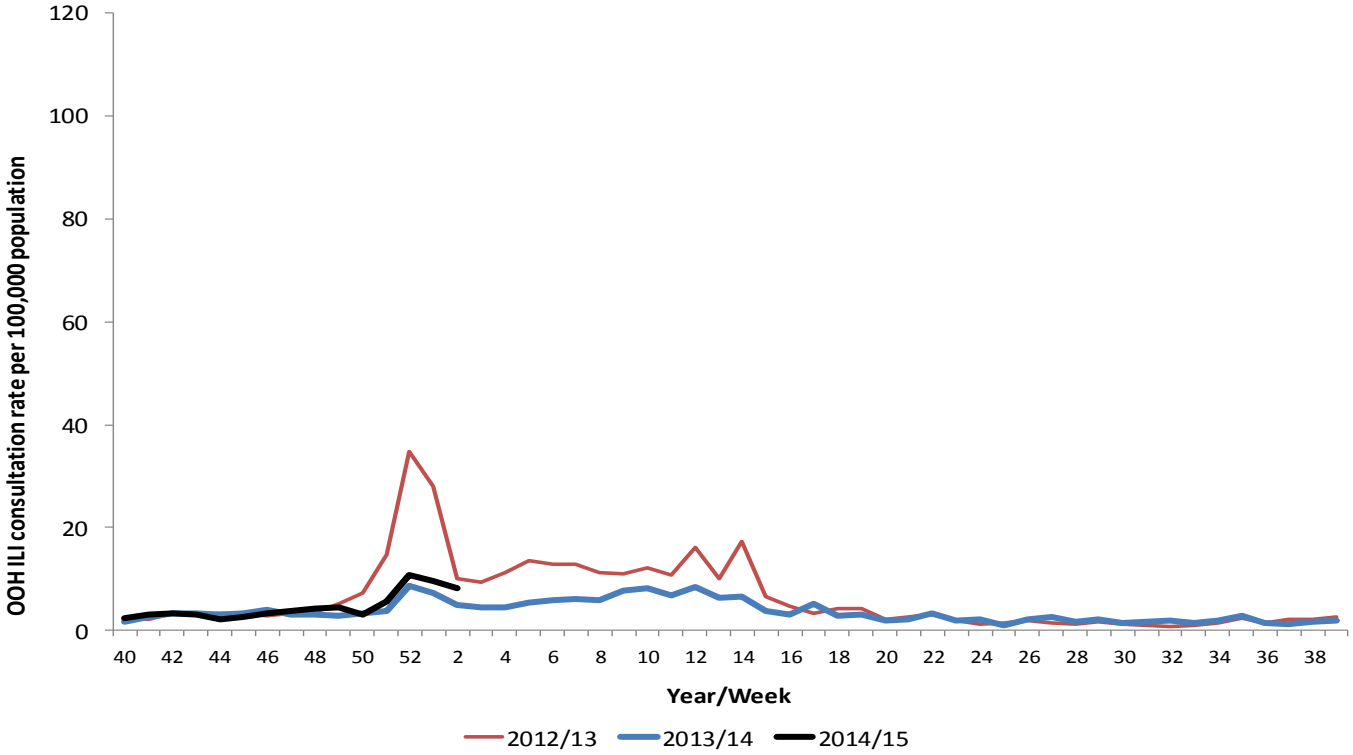
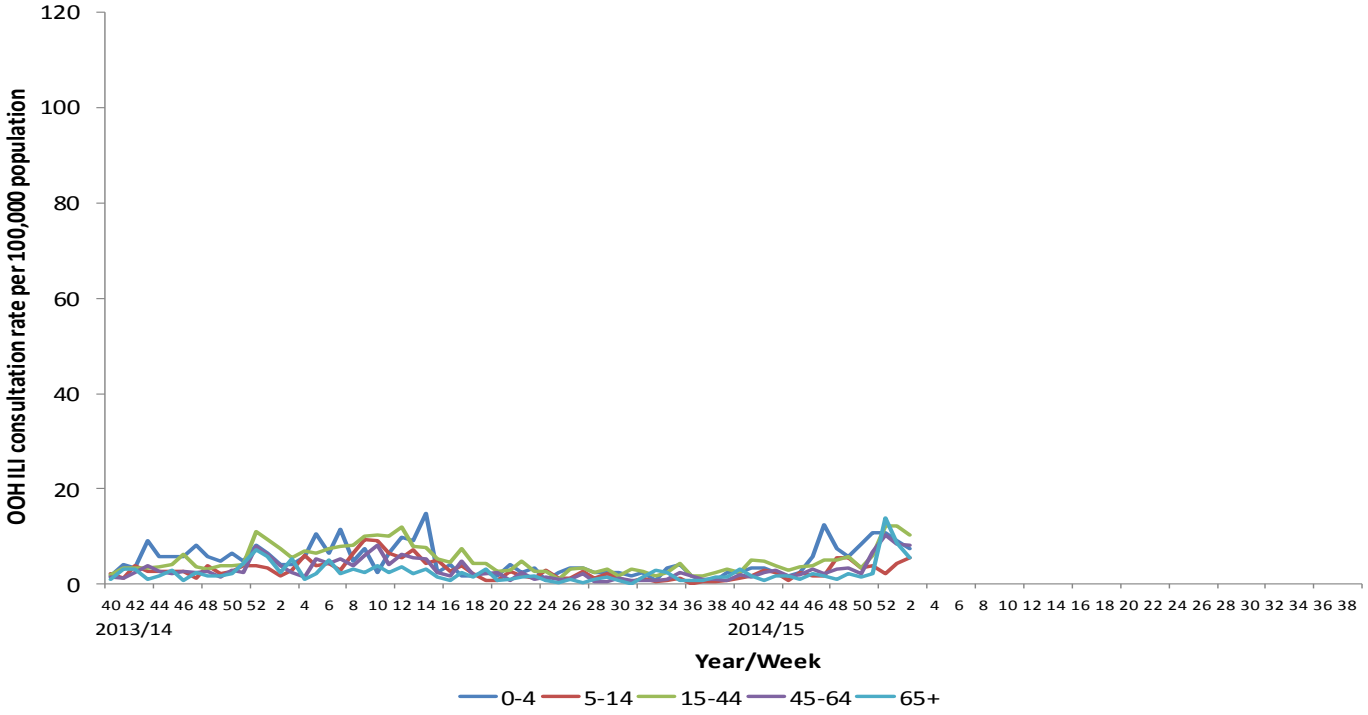


Figure 6. OOH Call rates of flu/FLI by age-group from week 40, 2013



Comment

The OOH consultation rate for flu/FLI has slightly decreased in week 2, and although higher than the same period last year, it is lower than 2012/13. Rates in week 2, 2015 decreased to 8.2 per 100,000 population from 9.5 per 100,000 in week 1, although still remaining higher than noted earlier in the season (Figures 5 and 6).

The OOH flu/FLI rate has generally decreased among almost all age groups and remained relatively low. In week 2, 2015 however, an increase was noted among those aged 5-14 years, while rates among all other age groups displayed a decrease in comparison with the previous week. The proportion of OOH total calls decreased slightly from 1.5% in week 1 to represent 1.4% of total calls to the OOH service in week 2, 2015.

Virology Data

Table 1. Virus activity in Northern Ireland, Week 2, 2014/15								
Source	Specimens Tested	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	RSV	Total influenza Positive	% Influenza Positive
Sentinel	6	3	0	0	0	2	3	50%
Non-sentinel	94	4	0	6	1	41	11	12%
Total	100	7	0	6	1	43	14	14%

Table 2. Cumulative virus activity in Northern Ireland, Week 40 - 2, 2014/15						
	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	Total Influenza	RSV
0-4	9	0	4	3	16	299
5-14	2	0	1	2	5	13
15-64	14	1	5	4	24	47
65+	15	0	7	1	23	43
Unknown	0	0	0	0	0	1
All ages	40	1	17	10	68	403

Table 3. Cumulative virus activity, Week 40 - Week 2, 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	8	0	4	3	15	299
5-14	0	0	0	0	0	0	2	0	1	2	5	13
15-64	3	1	0	1	5	4	11	0	5	3	19	43
65+	0	0	0	0	0	2	15	0	7	1	23	41
Unknown	0	0	0	0	0	0	0	0	0	0	0	1
All ages	4	1	0	1	6	6	36	0	17	9	62	397

Note

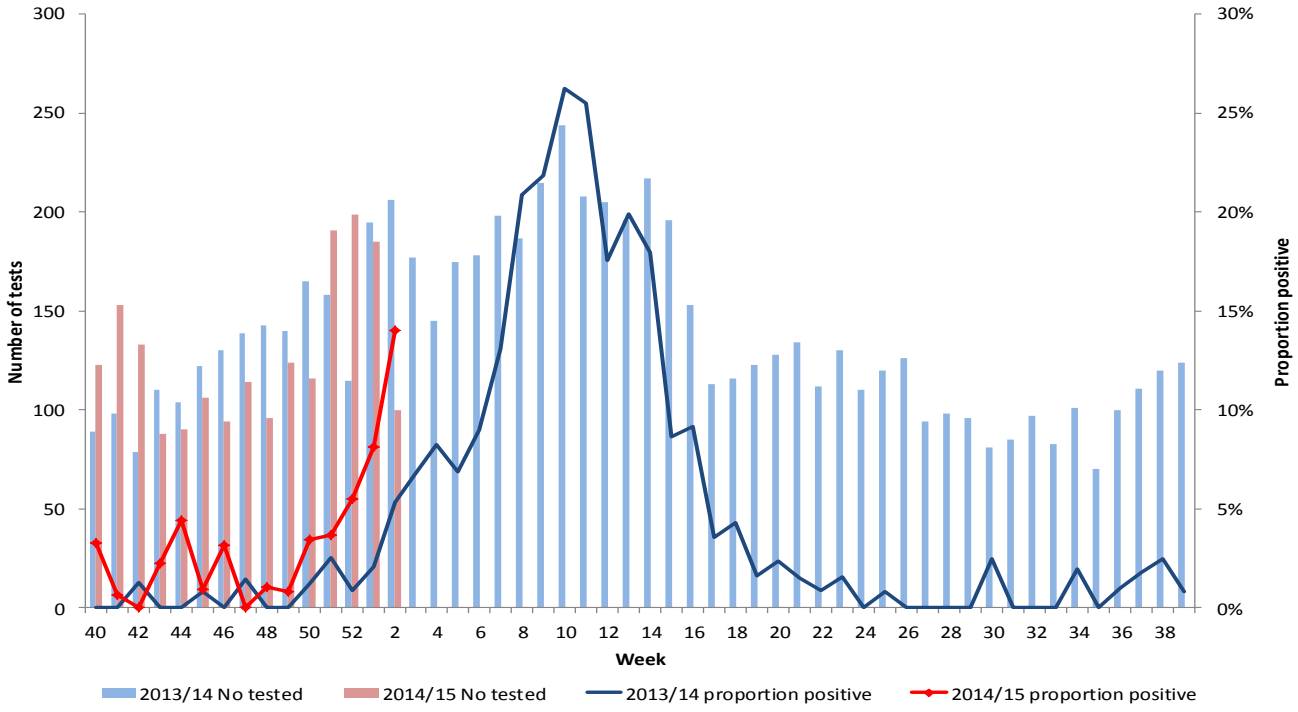
All virology data is provisional. The virology figures for previous weeks included in this or future bulletins are updated with data from laboratory returns received after the production of the last bulletin. The current bulletin reflects the most up-to-date information available.

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

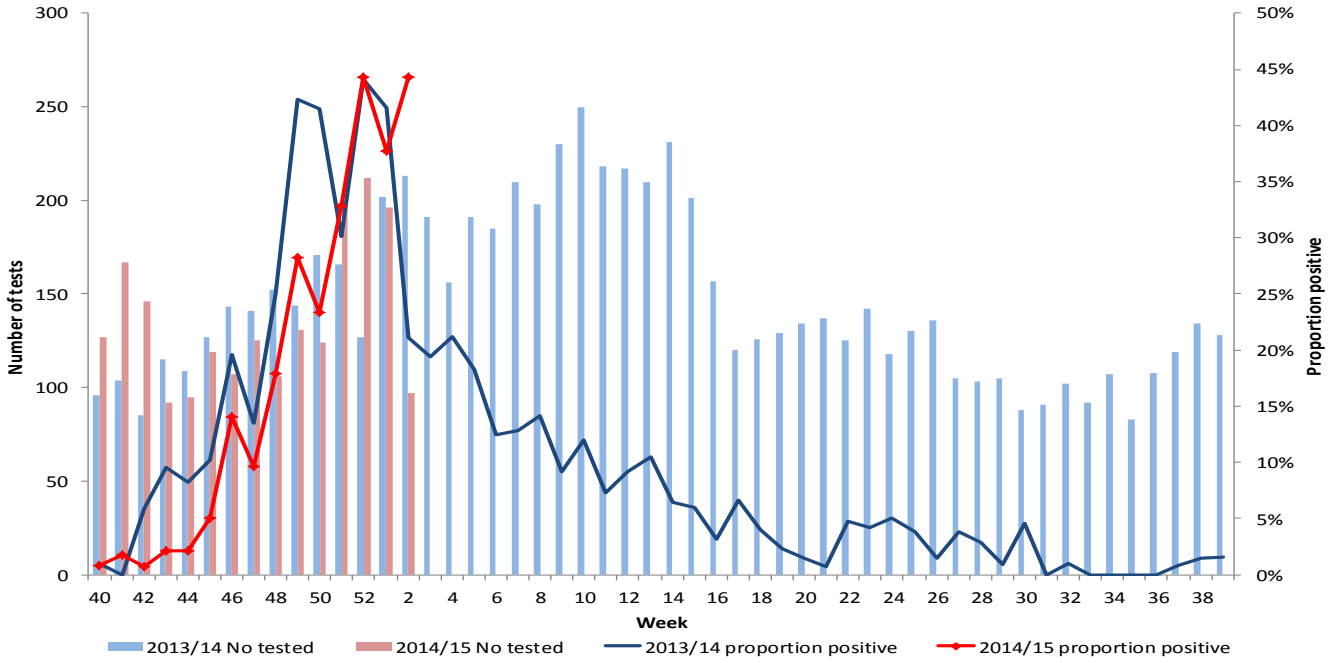
During week 2, 2015 there were 100 specimens submitted for testing, of which 7 were confirmed as influenza A(H3), 6 as influenza A untyped (typing awaited) and 1 as influenza B. This is marginally lower than the number detected in week 1 but higher than the number of positive detections during the same period last year. Positivity rates for influenza have increased this week to 14% from 8% the previous week and represent the highest proportion of influenza tests positive this season to date. The proportion positive in week 2, 2015 is also higher than the same period in 2013/14, although slighter lower than 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 were 43 RSV positive detections in week 2, 2015 with positivity rates increasing from 38% in week 1 to 44% in week 2, 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 higher than the same period in recent seasons. There have been a total of 403 detections of RSV since the beginning of the 2014-15 influenza season of which 74% fall within the 0-4 years age group (Figure 8, Table 2).

Influenza Vaccine Uptake

To 30th November 2014, provisional data suggested that vaccine uptake for those aged 65 years and over was 67.5%, lower than the same period in the 2013 (69.8%); while 61.7% of those under 65 and in an at risk group had received the vaccine, lower than in 2013 when 67.1% 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 30th November 2014, provisional data suggested that vaccine uptake among 2-4 year old children was 49.7%, while provisional uptake among children in P1 – P7 was 78.9%.

Emergency Department Syndromic Surveillance System

In week 2, 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

There has been one ICU patient confirmed with influenza since the last bulletin. To date there have been six ICU patients with confirmed influenza, of which five have been confirmed as influenza A (H3) and one as influenza A untyped (typing awaited).

There were no deaths in ICU patients with laboratory confirmed influenza reported in week 2 in the 2015. To date, there have been two deaths in ICU patients with laboratory confirmed influenza.

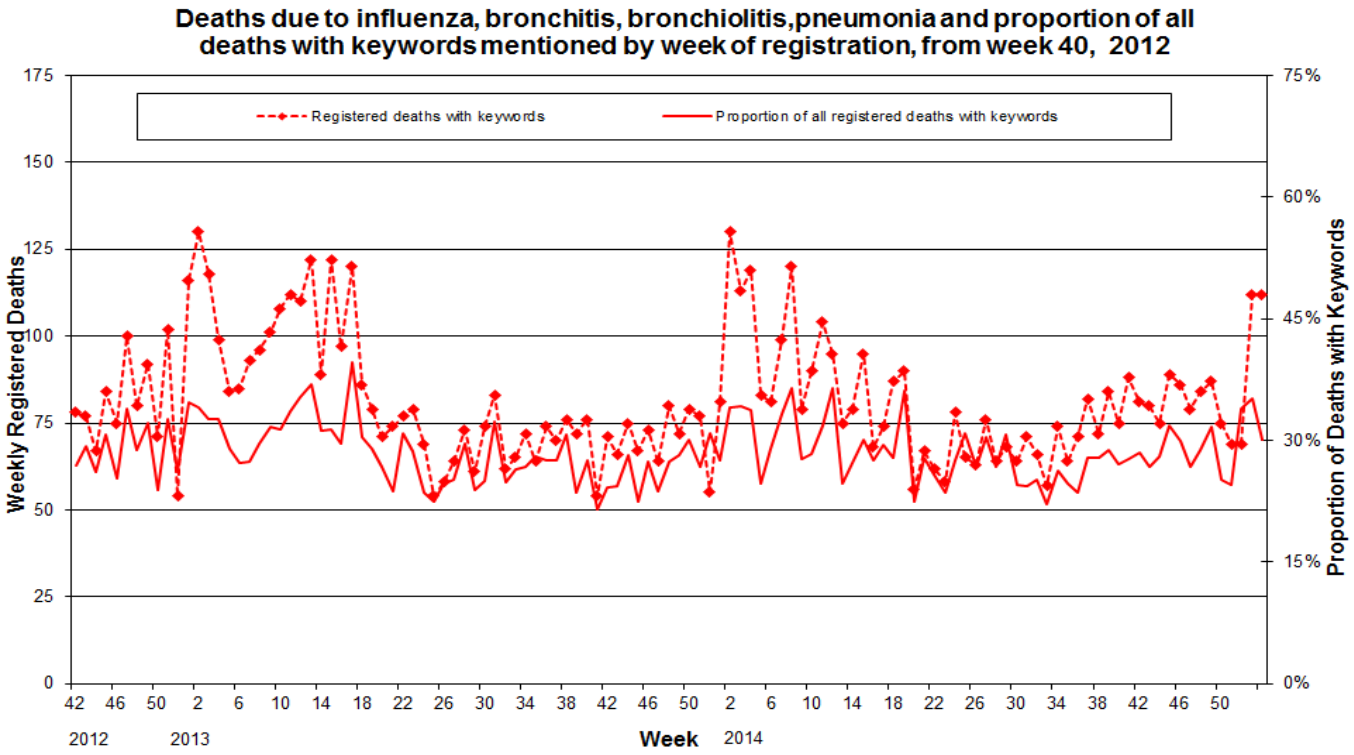
Outbreak Surveillance

There were no new confirmed influenza outbreaks reported in week 2, 2015. There has been one confirmed influenza A (H3) outbreak reported so far this season, compared 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 decreased in week 2, 2015 compared with the previous week. During week 2, 2015 the proportion of registered deaths decreased to 30%, from 35% the previous week. This is lower than noted during week 2 in 2014 (34%).

The number of registered deaths due to respiratory keywords remained stable in week 2 compared with week 1. In week 2, 2015, there were 373 registered deaths of which 112 related to these specific respiratory infections.

EuroMOMO

In weeks 51, 2014 to week 2, 2015 EuroMOMO reported no excess all-cause mortality in Northern Ireland. This data will be presented in a chart later in the season.

International Summary

Europe

Week 1, 2015:

- In week 01/2015, influenza activity remained low in most countries in the WHO European Region, but the number of countries with increased activity continued to rise compared to those in previous weeks.
- The level of influenza activity increased to medium (usual levels of activity) in seven of the 35 reporting countries, while the proportion of sentinel specimens positive for influenza virus was 16% overall – similar to that in the previous week (17%) – but with a higher proportion positive (26%) in the western parts of the Region.
- The predominant influenza virus was type A, with A(H3N2) viruses predominating in primary care, among laboratory-confirmed hospitalized cases and other sources of information. Eleven of 13 countries reported A(H3N2) as the dominant type.
- The number of specimens tested was lower than in the previous week due to the holiday season.

Season:

- The influenza season in Europe has started: the overall proportion of influenza-positive sentinel specimens was above 10% for the third consecutive week, despite most countries' still reporting low influenza activity.
- Influenza A(H3N2) viruses have been the predominant viruses detected across all surveillance systems, and most of the A(H3N2) viruses characterized genetically belong to genetic subgroups containing viruses that have drifted antigenically compared to the A(H3N2) virus in use for the 2014–2015 northern hemisphere influenza vaccine.
- The circulating influenza A(H3N2), A(H1N1)pdm09 and B viruses remain susceptible to the antivirals oseltamivir and zanamivir currently licensed in Europe.
- No indication of increased mortality has been reported in the European project for monitoring excess mortality for public health action (EuroMOMO: http://www.euromomo.eu).

  http://www.flunewseurope.org/

Worldwide (WHO)

As at 12th January 2015:

Globally, influenza activity continued to increase in the northern hemisphere with influenza A(H3N2) viruses predominating so far. Antigenic characterization of most recent A(H3N2) viruses so far indicated differences from the A(H3N2) virus used in the influenza vaccines for the northern hemisphere 2014-2015. The tested influenza A(H3N2) viruses so far did show sensitivity to neuraminidase inhibitors.

- In North America, the influenza season was on-going with influenza activity still increasing in most areas. Influenza A(H3N2) was the predominant virus.
- In Europe influenza activity was still low, but the season seemed to have started.
- In eastern Asia, influenza activity increased with influenza A(H3N2) virus predominated.
- In northern and western Africa influenza activity increased with influenza B virus predominant.
- In tropical countries of the Americas, influenza activity increased in some countries of the Caribbean, decreased in Central America and was low in the tropical countries of South America.
- In tropical Asia, influenza activity increased slightly but remained low with influenza B predominating.
- In the southern hemisphere, influenza activity remained at low levels, though ILI activity remained high in several Pacific Islands.
- Based on FluNet reporting (as of 9 January 2015 13:00 UTC), during weeks 51 to 52 (14 December 2014 to 27 December 2014), National Influenza Centres (NICs) and other national influenza laboratories from 80 countries, areas or territories reported data. The WHO GISRS laboratories tested more than 96 535 specimens. 23 421 were positive for influenza viruses, of which 22 129 (94.5%) were typed as influenza A and 1292 (5.5%) as influenza B. Of the sub-typed influenza A viruses, 163 (1.7%) were influenza A(H1N1)pdm09 and 9211 (98.3%) were influenza A(H3N2). Of the characterized B viruses, 423 (97.9%) belonged to the B-Yamagata lineage and 9 (2.1%) 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:

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 Jillian Johnston.