

## Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 4 (19 January 2015 – 25 January 2015)

### Summary

- GP Influenza activity in Northern Ireland has decreased with most indicators remaining at a moderate level.
- GP consultation rates for combined flu and flu-like illness (flu/FLI) have remained relatively stable and are below the pre-epidemic Northern Ireland threshold of 52.0 per 100,000 population at 34.6 per 100,000 population in week 4, 2015, with most indicators still higher than noted during the same period last year.
- The OOH consultation rate for flu/FLI has increased but remained low in week 4 at 7.7 per 100,000 population. The rate also remained relatively low in all age groups with the highest rate noted among the 5-14 years age group.
- RSV activity has decreased in week 4, 2015.
- Influenza vaccine uptake to 31<sup>st</sup> December 2014 was 70.3% for those aged 65 and over, 66.4% for those aged under 65 and in an at risk group, 52.7% among 2-4 year old children and 79.4% among children in P1 to P7.
- There have been two new admissions to ICU with confirmed influenza reported since the last bulletin; there have been a total of 11 ICU patients with confirmed influenza this season to date.
- There were no deaths in ICU patients with laboratory confirmed influenza reported in week 4, 2015; there have been 4 deaths in ICU patients with laboratory confirmed influenza this season to date.
- There were no new confirmed influenza outbreaks reported to PHA in week 4, 2015.
- No overall excess mortality was reported in week 4, 2015.
- In week 4, 2015 there were fewer than five attendances for influenza like illness across the contributing emergency departments.

### Introduction

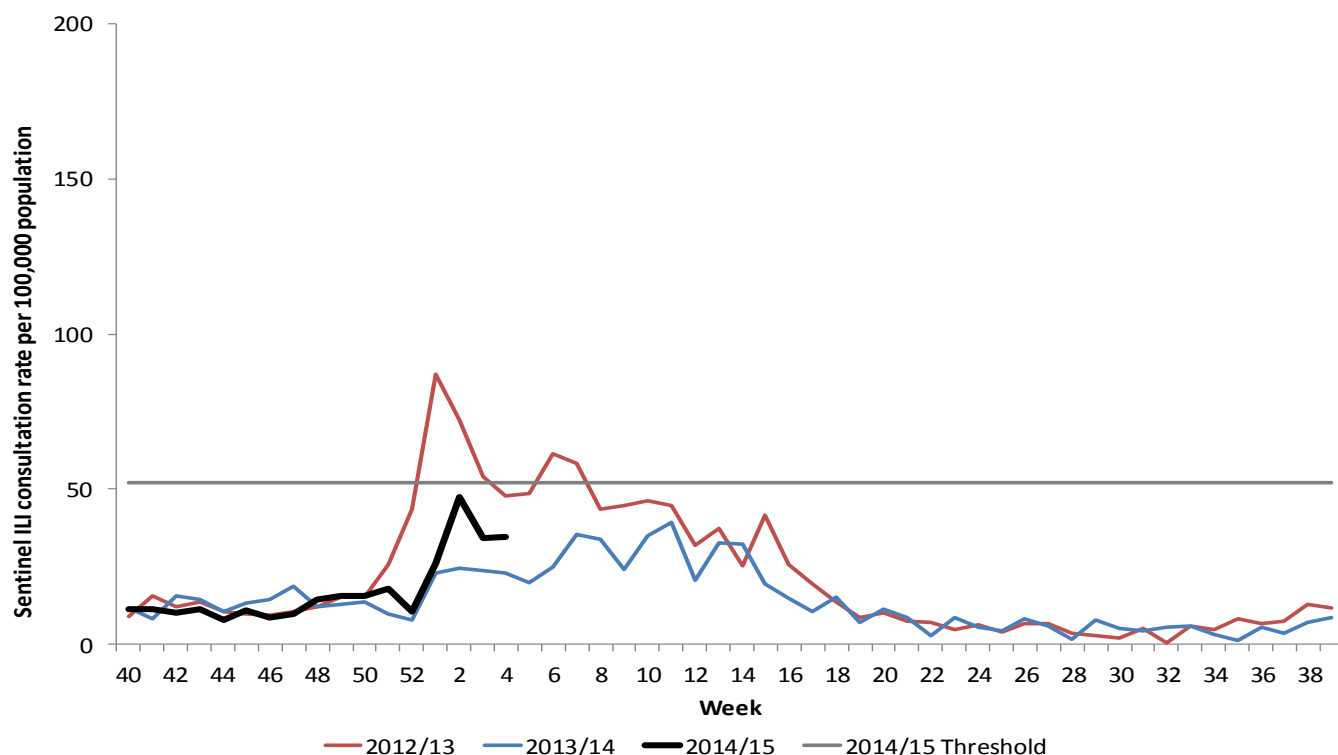
In order to monitor influenza activity in Northern Ireland a number of surveillance systems are in place.

Additional surveillance systems are:

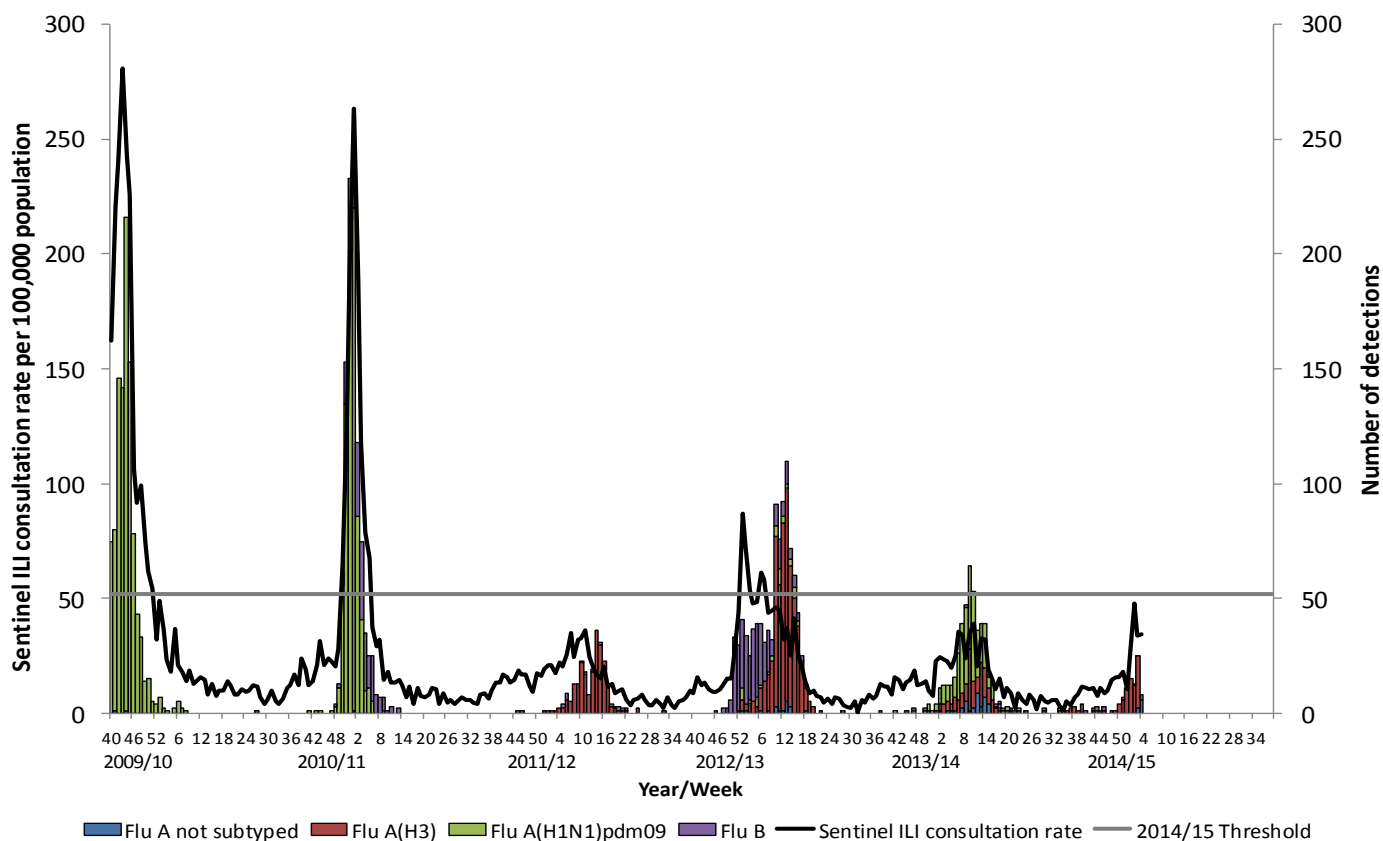
- GP sentinel surveillance representing 11.7% of Northern Ireland population;
- GP Out-of-Hours surveillance system representing the entire population;
- Virological reports from the Regional Virus Laboratory (RVL);
- Mortality data from Northern Ireland Statistics and Research Agency (NISRA);
- Excess 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

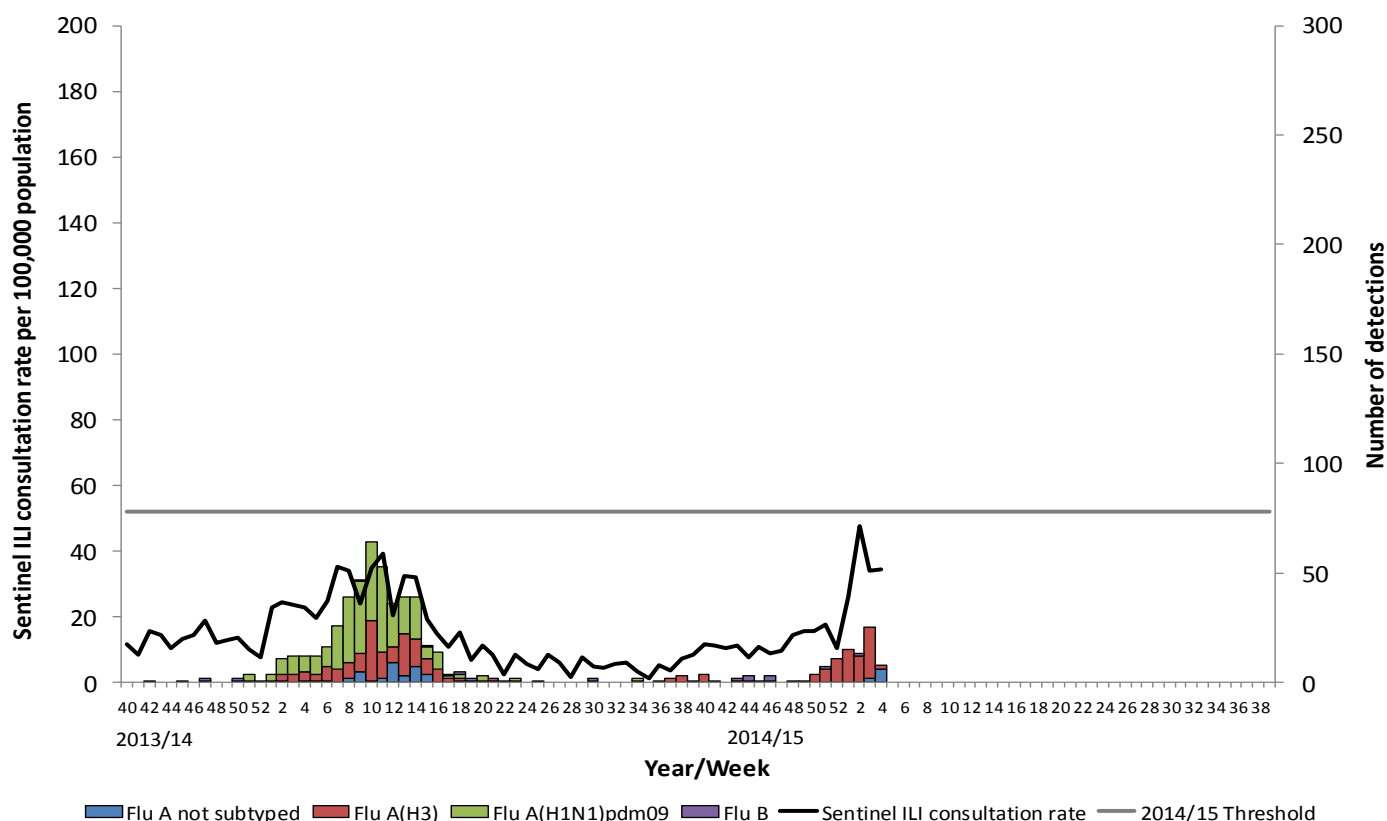
**Figure 1. Sentinel GP consultation rates for flu/FLI 2012/13 - 2014/15**



**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**

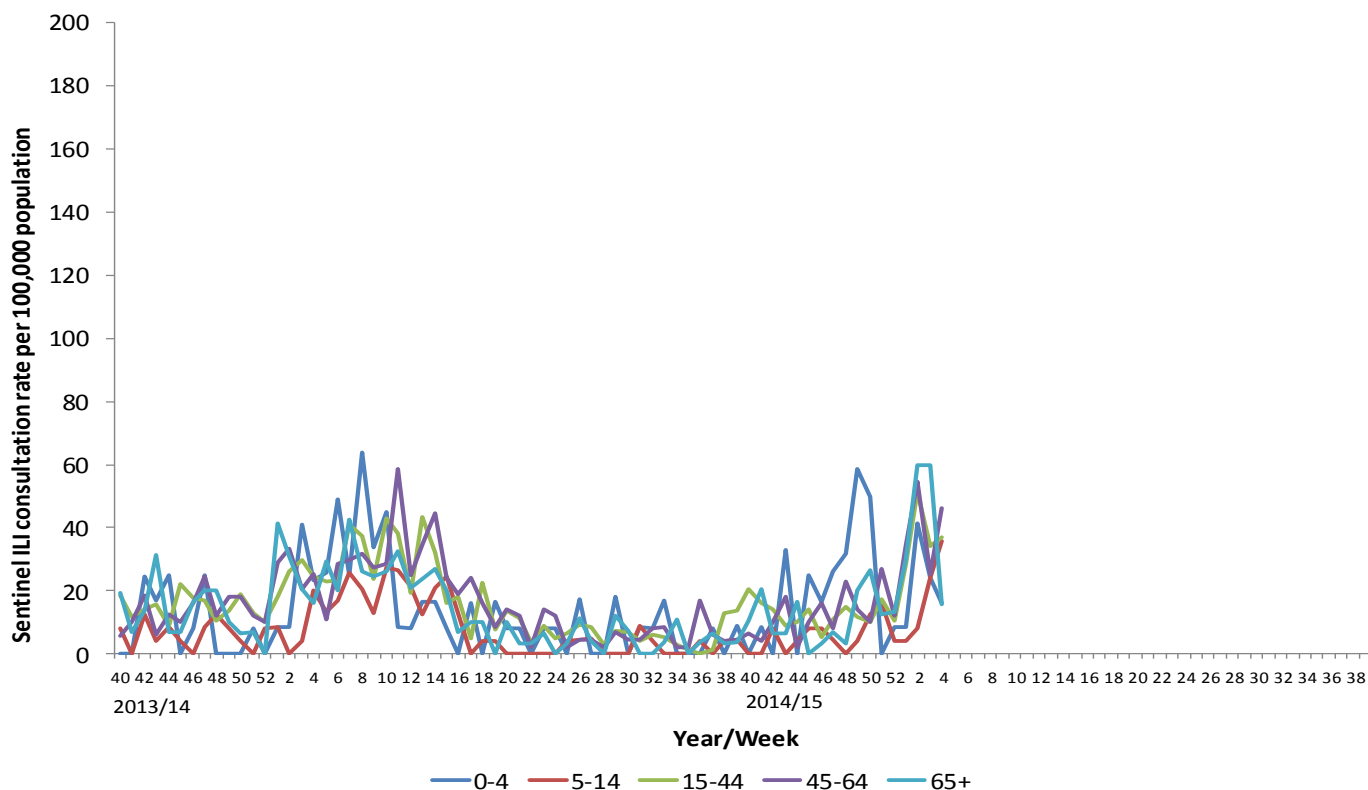


### Comment

GP consultation rates have remained relatively stable in week 4 increasing only marginally to 34.6 per 100,000 from 34.1 per 100,000 in week 3, 2015. GP consultation rates in week 4, 2015 remain higher than noted earlier in the season and are higher than noted during the same period last year, although still lower than noted during the same period in 2012/13.

Rates remain 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

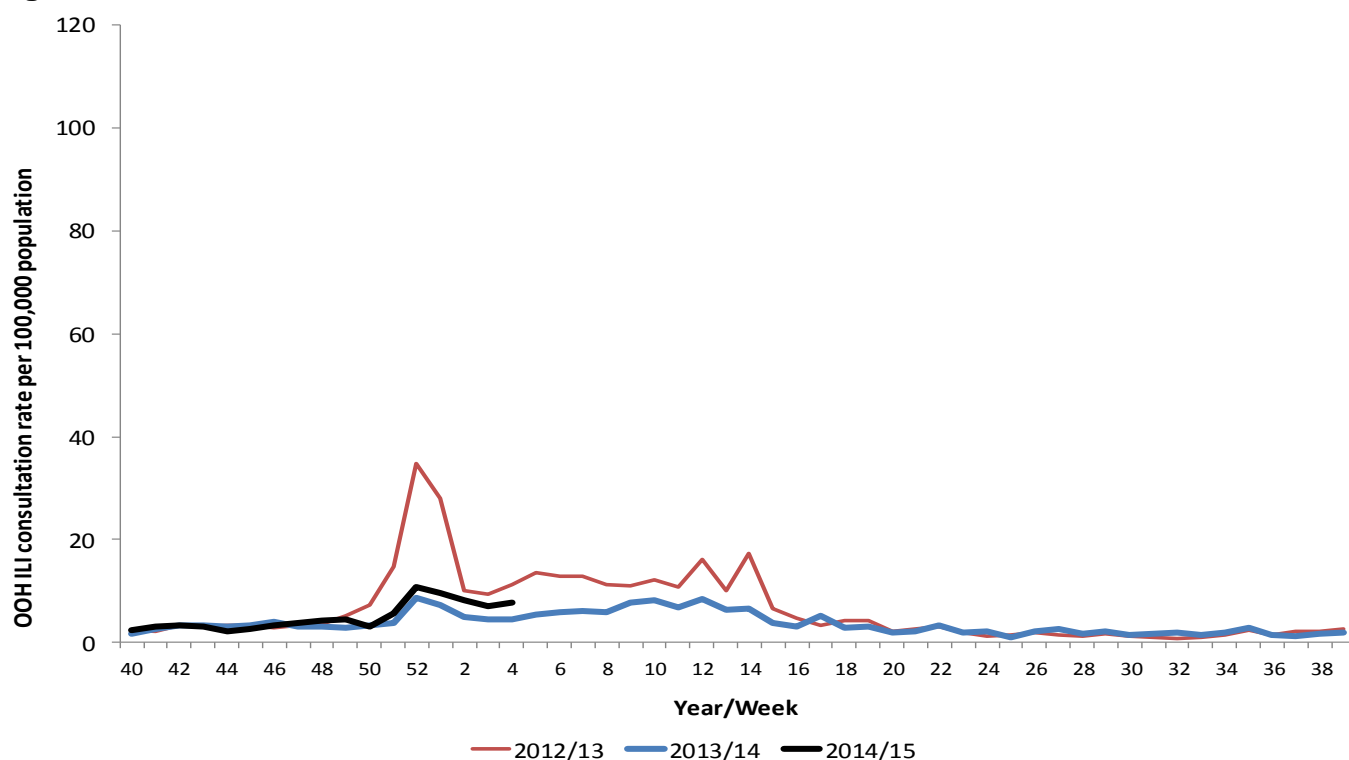
Sentinel GP flu/FLI consultations have increased among most age groups in week 4, 2015.

In week 4, an increase in consultation rates were noted among the 5-14, 15-44 and 45-64 years age groups when compared with the previous week. Rates decreased among those aged 0-4 years and 65 years and over, with a sharp decrease noted among the latter.

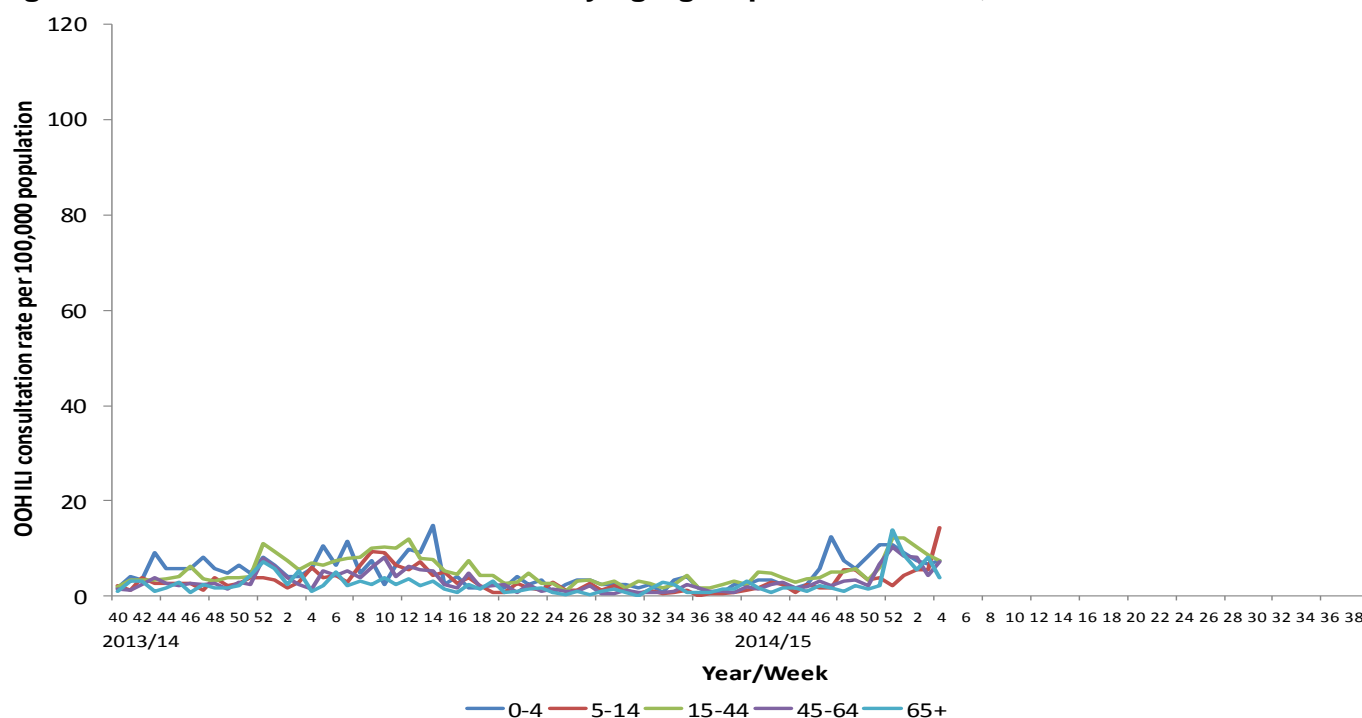
In general, GP consultation rates for combined flu' and flu'-like-illness have remained stable or decreased among the youngest and eldest age groups in recent weeks with rates among those aged 0-4 settling somewhat in comparison with the higher rates displayed earlier in the season. GP consultation rates among those aged between 5 and 64 years have generally fluctuated or increased in recent weeks, while rates among those aged 45-64 years represented the highest age-specific consultation rate in week 4, 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 increased in week 4, and although remaining higher than the same period last year, is lower than in 2012/13. Rates in week 4, 2015 increased to 7.7 per 100,000 population from 7.0 per 100,000 in week 3, and remains higher than noted earlier in the season (Figures 5 and 6).

The OOH flu/FLI rate has increased among most age groups but remained relatively low. In week 4, 2015, an increase was noted among those aged 0-4, 5-14 and 45-64 years, while rates among those aged 15-44 and 65 years and over displayed a decrease in comparison with the previous week. The proportion of OOH total calls increased slightly from 1.2% in week 3 to represent 1.5% of total calls to the OOH service in week 4, 2015.

## Virology Data

**Table 1. Virus activity in Northern Ireland, Week 4, 2014/15**

Source	Specimens Tested	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	RSV	Total influenza Positive	% Influenza Positive
Sentinel	2	0	0	1	0	1	1	50%
Non-sentinel	52	2	0	5	0	6	7	13%
<b>Total</b>	<b>54</b>	<b>2</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>7</b>	<b>8</b>	<b>15%</b>

**Table 2. Cumulative virus activity in Northern Ireland, Week 40 - 4, 2014/15**

	Flu AH3	Flu A (H1N1) 2009	A (untyped)	Flu B	Total Influenza	RSV
0-4	14	0	1	3	18	323
5-14	6	1	3	2	12	15
15-64	24	2	3	4	33	72
65+	37	1	1	1	40	61
Unknown	0	0	0	0	0	1
<b>All ages</b>	<b>81</b>	<b>4</b>	<b>8</b>	<b>10</b>	<b>103</b>	<b>472</b>

**Table 3. Cumulative virus activity, Week 40 - Week 4, 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	13	0	1	3	17	323
5-14	1	0	1	0	2	1	5	1	2	2	10	14
15-64	6	1	0	1	8	11	18	1	3	3	25	61
65+	1	0	0	0	1	2	36	1	1	1	39	59
Unknown	0	0	0	0	0	0	0	0	0	0	0	1
<b>All ages</b>	<b>9</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>12</b>	<b>14</b>	<b>72</b>	<b>3</b>	<b>7</b>	<b>9</b>	<b>91</b>	<b>458</b>

### Note

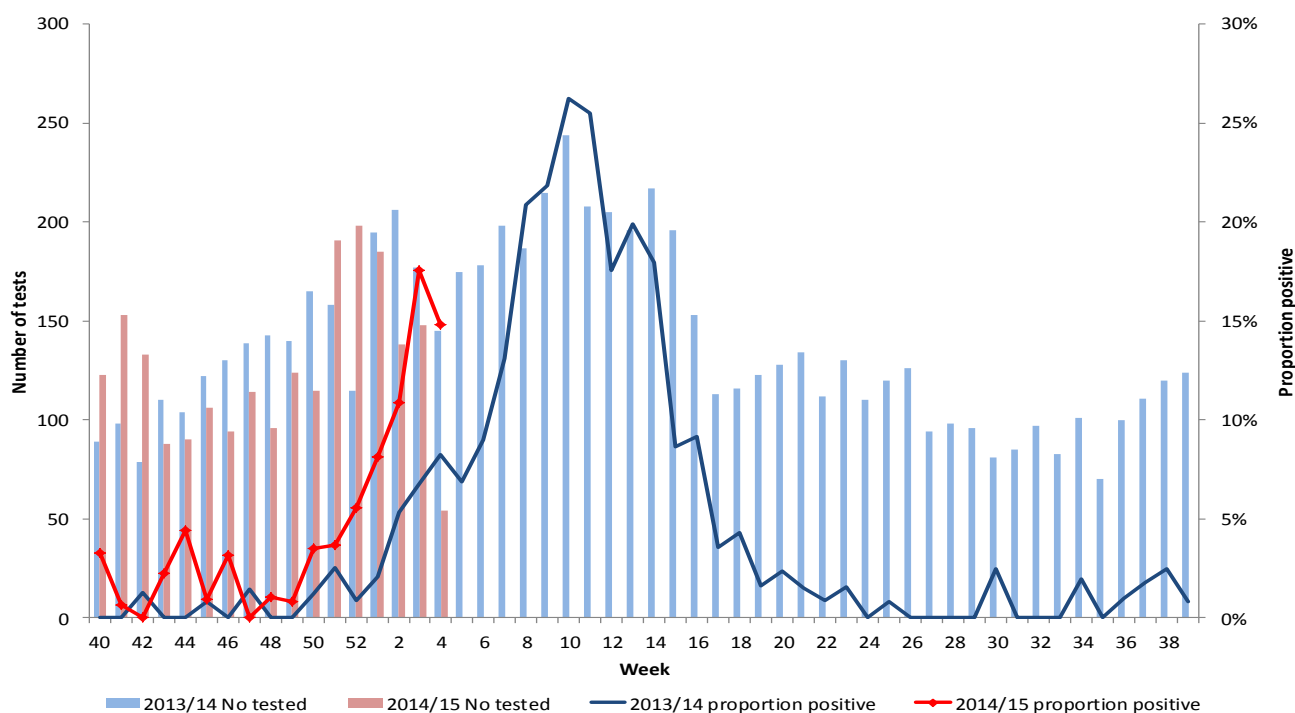
All virology data is provisional. The virology figures for previous weeks included in this or future bulletins are updated with data from laboratory returns received after the production of the last bulletin. The current bulletin reflects the most up-to-date information available.

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

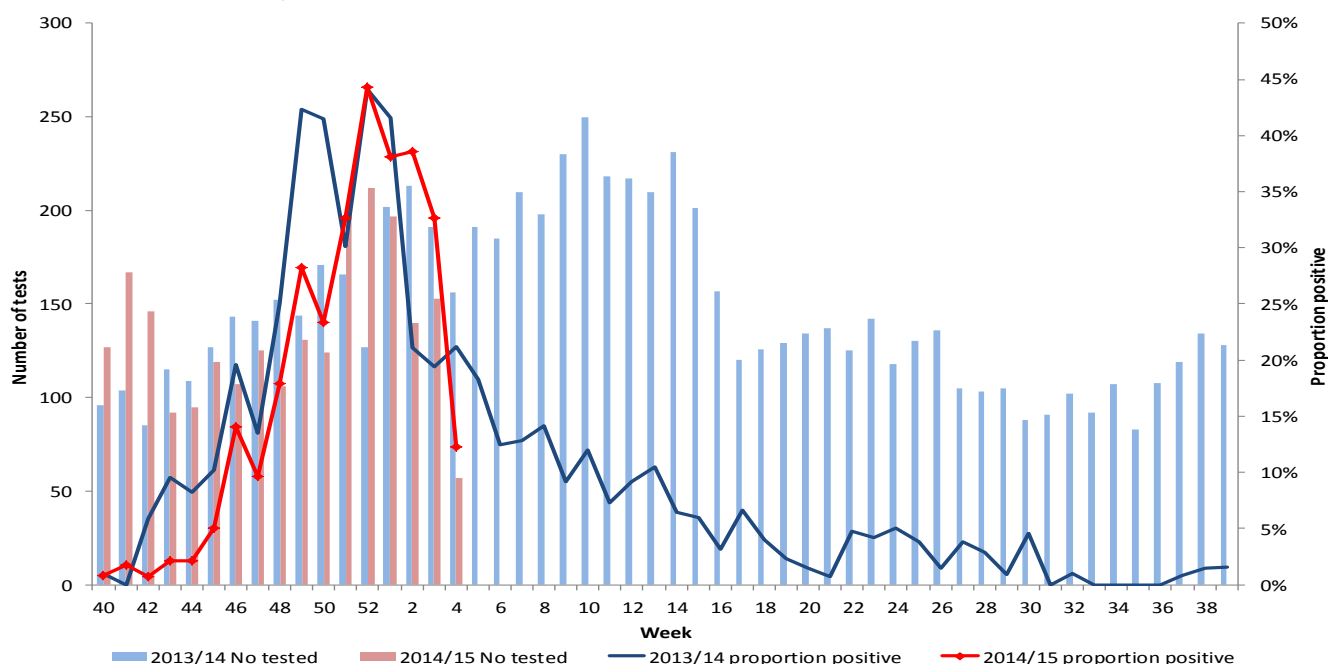
During week 4, 2015 there were 54 specimens submitted for testing, of which 2 were confirmed as influenza A(H3) and 6 as influenza A untyped (typing awaited). This is lower than the number detected in week 3 and lower than the number of positive detections during the same period in recent seasons. Positivity rates for influenza have also decreased this week to 15% from 18% the previous week but remain higher than noted earlier in the season. The proportion positive in week 4, 2015 is higher than the same period in 2013/14 but lower than noted 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 7 RSV positive detections in week 4, 2015 with positivity rates decreasing from 33% in week 3 to 12% in week 4, 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 the same period in recent seasons. There have been a total of 472 detections of RSV since the beginning of the 2014-15 influenza season of which 68% fall within the 0-4 years age group (Figure 8, Table 2).

## Influenza Vaccine Uptake

To 31<sup>st</sup> December 2014, provisional data suggested that vaccine uptake for those aged 65 years and over was 70.3%, lower than the same period in last season (72.6%); while 66.4% of those under 65 and in an at risk group had received the vaccine, lower than in the 2013/14 season when 72.3% 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 31<sup>st</sup> December 2014, provisional data suggested that vaccine uptake among 2-4 year old children was 52.7%, while provisional uptake among children in P1 – P7 was 79.4%.

## Emergency Department Syndromic Surveillance System

In week 4, 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 have been two ICU patients confirmed with influenza since the last bulletin. To date there have been eleven ICU patients with confirmed influenza, of which seven have been confirmed as influenza A (H3), two as influenza A (H1N1)pdm09 and two as influenza A untyped (typing awaited).

There were no deaths in ICU patients with laboratory confirmed influenza reported in week 4 in the 2015. To date, there have been four deaths in ICU patients with laboratory confirmed influenza.

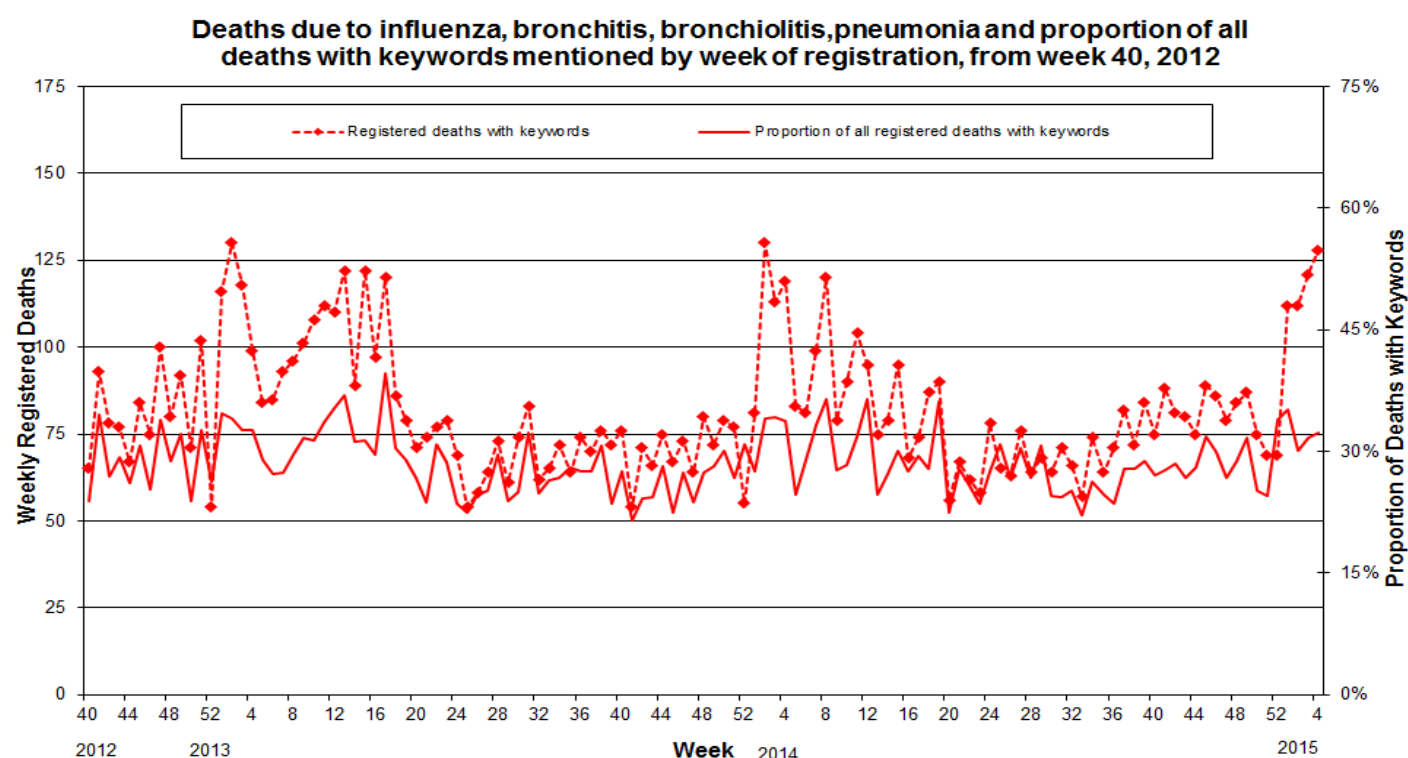
## Outbreak Surveillance

There were no new confirmed influenza outbreaks reported in week 4, 2015. There have been two confirmed influenza A (H3) outbreaks 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 remained stable in week 4, 2015 compared with the previous week at 32%. This is lower than noted during week 4 in 2014 (34%). In week 4, 2015, there were 397 registered deaths of which 128 related to these specific respiratory infections.

## EuroMOMO

No overall excess mortality was reported by EuroMOMO in week 4, 2015 in Northern Ireland.

## International Summary

### Europe

Week 3, 2015:

The influenza season is well under way, in particular in western and northern European countries.

- This week, 29 countries reported increased influenza activity and the overall proportion of influenza-positive sentinel specimens reached 40%.
- Excess all-cause mortality among the elderly (65+), consistent with the increased influenza activity and the predominating circulation of influenza A(H3N2), has been observed during recent weeks in Portugal, the United Kingdom (England, Scotland and Wales), the Netherlands, Spain and France (see the EuroMOMO project at <http://www.euromomo.eu>).
- Although the A(H3N2) viruses characterized so far exhibit antigenic differences to the virus included in the 2014–2015 northern hemisphere influenza vaccine, vaccination of the elderly and other risk groups is still recommended, since the A(H3N2) component is expected to reduce the likelihood of severe outcomes due to cross-protection, and both the A(H1N1)pdm09 and influenza B components are expected to be effective.

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

### Worldwide (WHO)

As at 26<sup>th</sup> January 2015:

Globally, influenza activity was high in the northern hemisphere with influenza A(H3N2) viruses predominating so far this season. Antigenic characterization of most recent A(H3N2) viruses thus far indicated differences from the A(H3N2) virus used in the influenza vaccines for the northern hemisphere 2014-2015. Based on tests to date, the influenza A(H3N2) viruses are expected to be sensitive to neuraminidase inhibitors.

- In North America, the influenza season was on-going with still high levels of influenza activity in most countries. Influenza A(H3N2) virus predominated. The influenza activity might have peaked in the USA.

- In Europe influenza activity was still on the rise with highest activity in the north-western part. Influenza A(H3N2) predominated this season.
- In northern and western Africa influenza activity seemed to have peaked with influenza B virus predominating, while Egypt reported mainly influenza A(H3N2) detections.
- In eastern Asia, influenza activity started to decrease with influenza A(H3N2) virus predominating.
- In central Asia influenza activity remained low.
- In western Asia, Bahrain and the Islamic Republic of Iran reported mainly influenza A(H1N1)pdm09 activity.
- In tropical countries of the Americas, influenza activity was low in most countries of the Caribbean, Central America and in the tropical countries of South America.
- In the southern hemisphere, influenza activity remained at inter-seasonal levels.
- Based on FluNet reporting (as of 23 January 2015 18:05 UTC), during 2014, week 53 and 2015 week 1 (28 December 2014 to 10 January 2015), National Influenza Centres (NICs) and other national influenza laboratories from 88 countries, areas or territories reported data. The WHO GISRS laboratories tested more than 133 812 specimens. 32 903 were positive for influenza viruses, of which 30 926 (94%) were typed as influenza A and 1977 (6%) as influenza B. Of the sub-typed influenza A viruses, 453 (3.4%) were influenza A(H1N1)pdm09 and 12 678 (96.6%) were influenza A(H3N2). Of the characterized B viruses, 495 (98%) belonged to the B-Yamagata lineage and 10 (2%) to the B-Victoria lineage.
- [http://www.who.int/influenza/surveillance\\_monitoring/updates/latest\\_update\\_GIP\\_surveillance/en/index.html](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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