

## Influenza Weekly Surveillance Bulletin

Northern Ireland, Week 51 (14 December 2015 – 20 December 2015)

### Summary

- Influenza GP consultations in Northern Ireland have decreased slightly and remain at relatively low levels, while virological detections of influenza have increased.
- GP consultation rates for combined flu and flu-like illness (flu/FLI) remain below the 2015/16 pre-epidemic Northern Ireland threshold<sup>1</sup> at 14.3 per 100,000 population in week 51.
- The OOH consultation rate for flu/FLI remained low in week 51 at 5.2 per 100,000 population, both overall and in all age groups.
- RSV activity has decreased in week 50 and is lower than the same period during last season.
- There was one admission to ICU with confirmed influenza reported in week 51, 2015.
- There were no deaths in ICU patients with laboratory confirmed influenza reported in week 51, 2015.
- In week 51, 2015 EuroMOMO did not report an excess in mortality.
- There were no confirmed influenza outbreaks reported to PHA in week 51, 2015.

### Introduction

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

Surveillance systems include:

- 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;

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<sup>1</sup> The pre-epidemic threshold for Northern Ireland is 49.4 per 100,000 population this year (2015/16)

## Sentinel GP Consultation Data

Figure 1. Sentinel GP consultation rates for flu/FLI 2013/14 - 2015/16

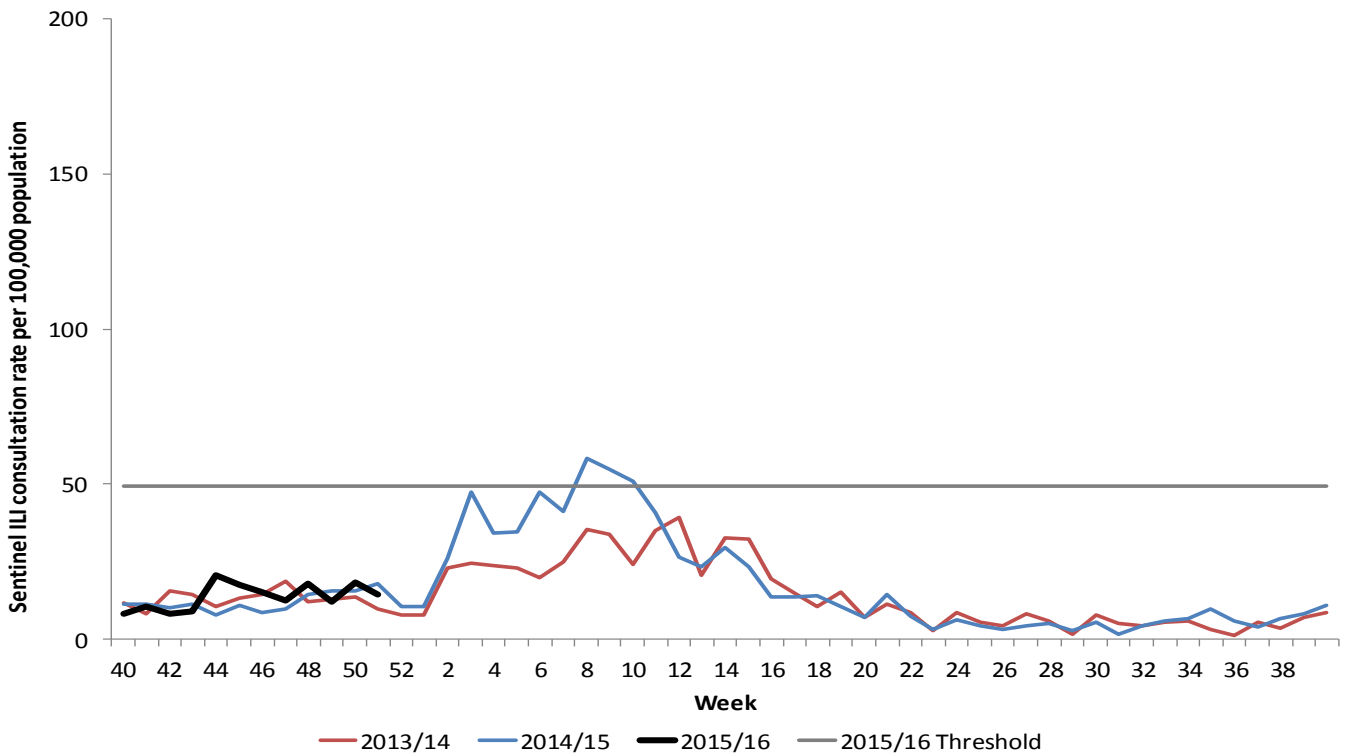
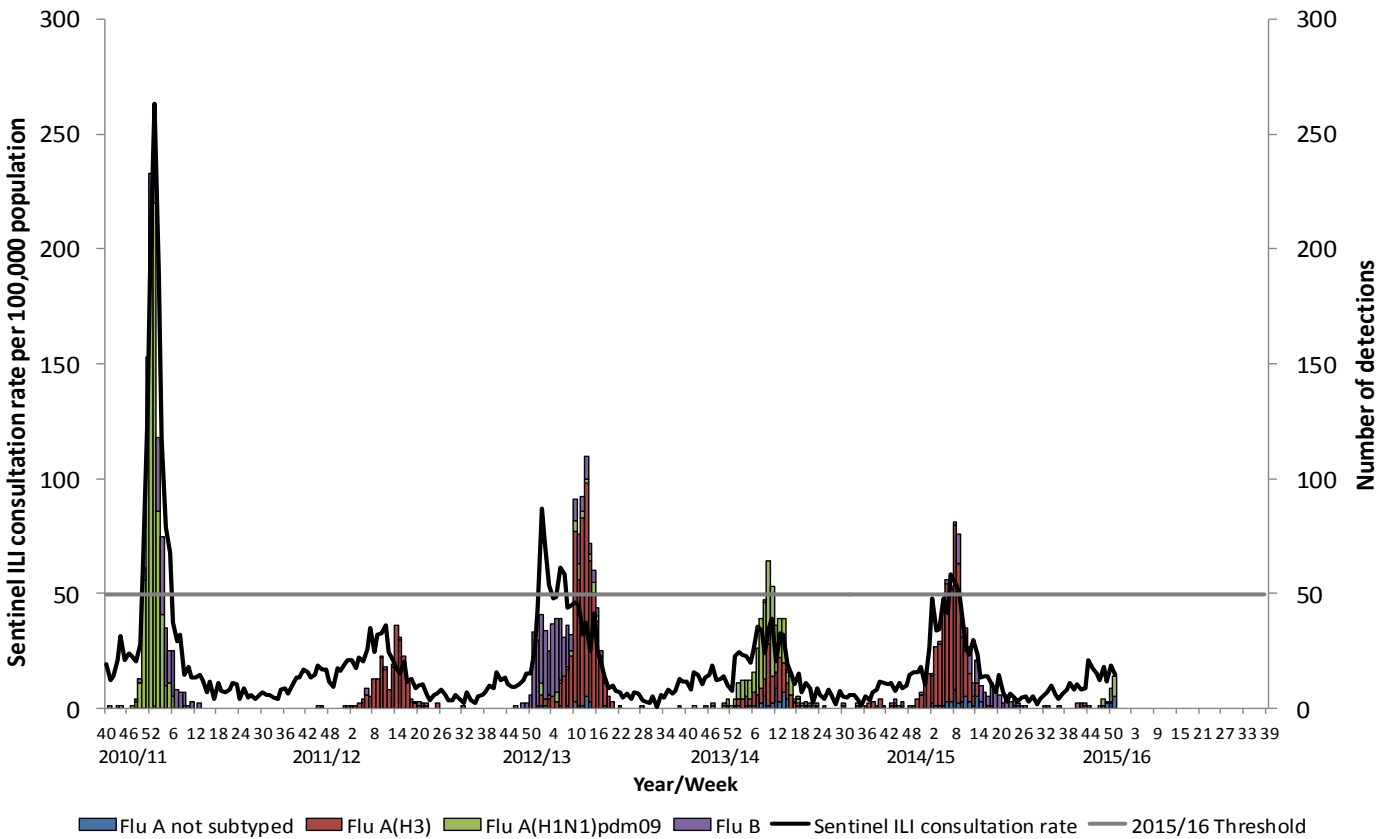
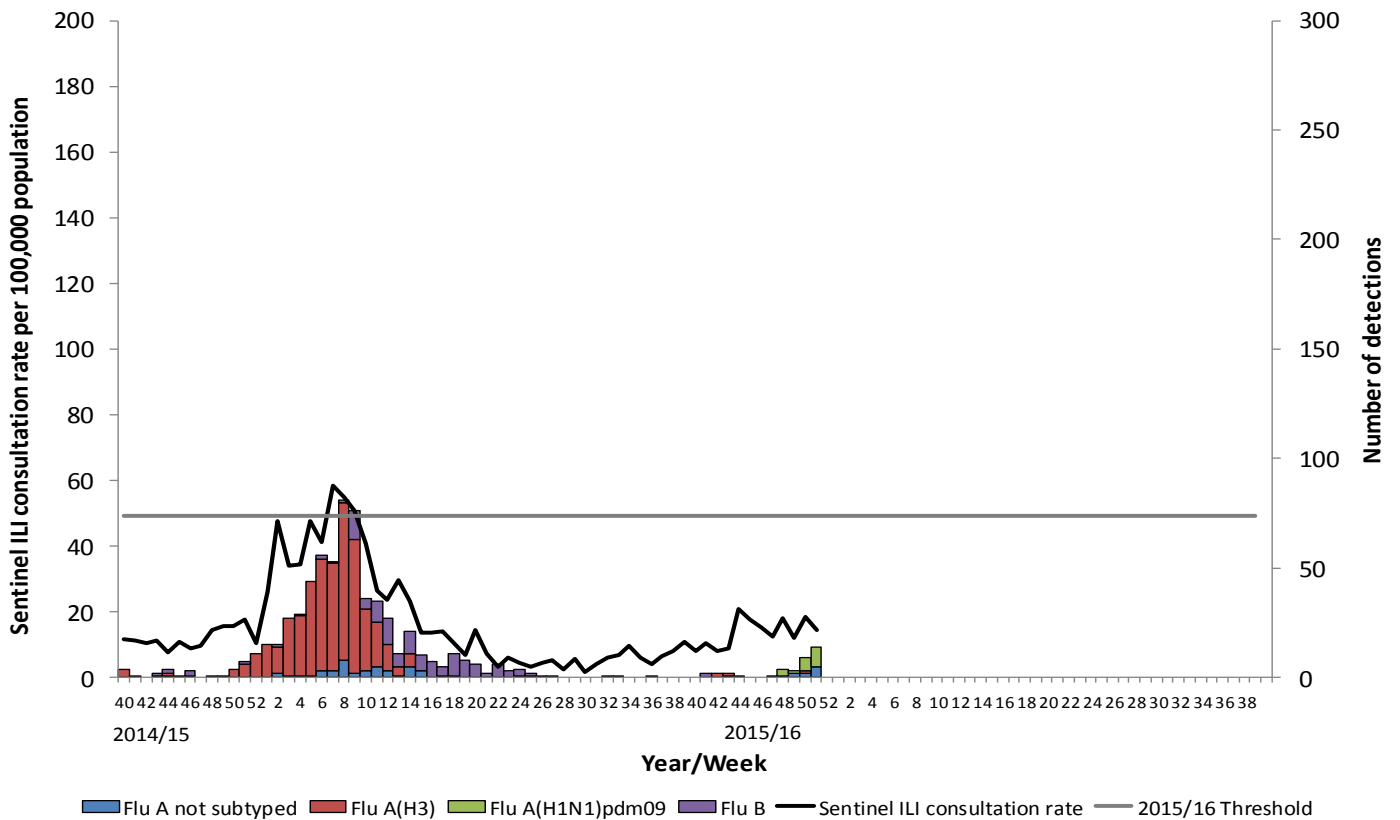


Figure 2. Sentinel GP combined consultation rates for flu/FLI and number of influenza positive detections 2010/11 – 2015/16



**Figure 3. Sentinel GP consultation rates for flu/FLI and number of virology 'flu detections from week 40, 2014**

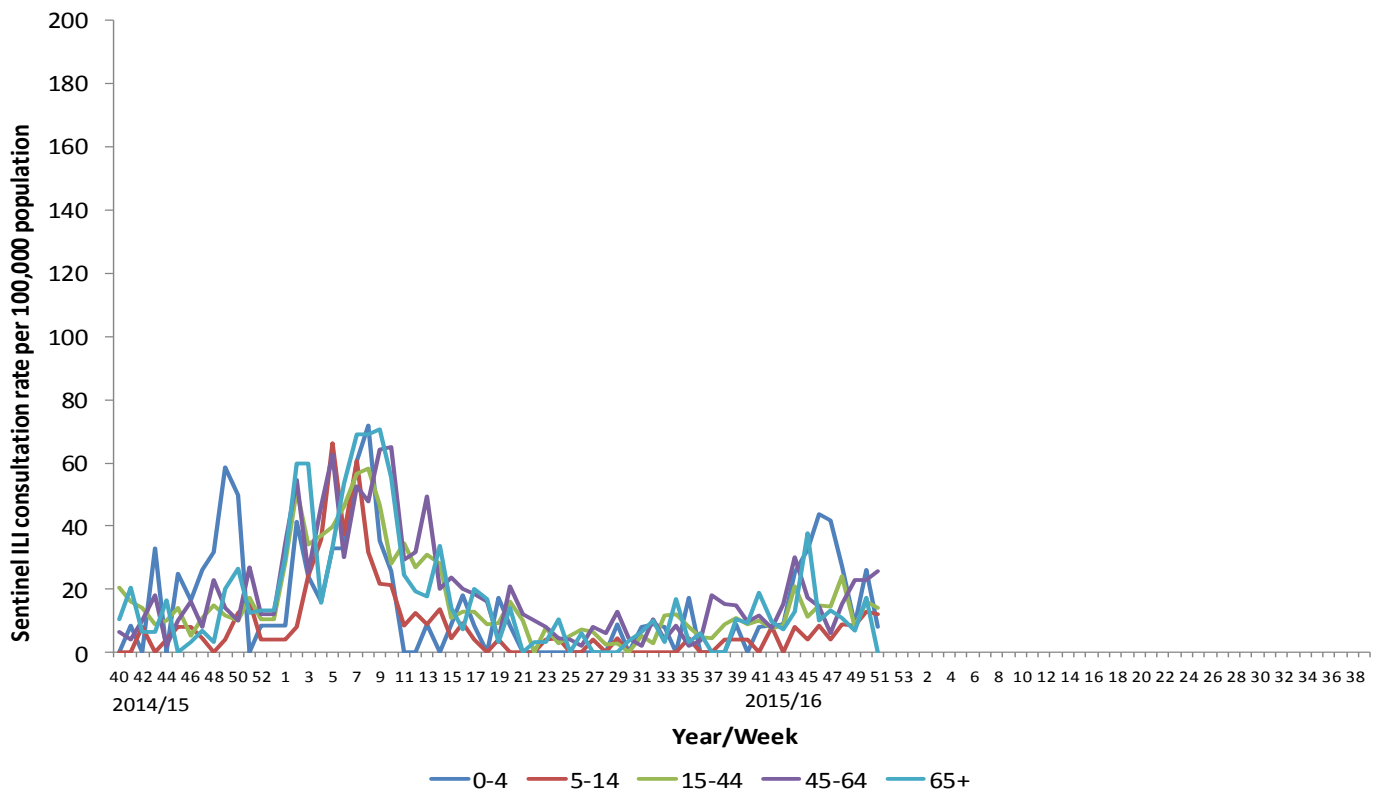


**Comment**

GP consultation rates have decreased in week 51 to 14.3 per 100,000 population from in 18.4 per 100,000 in week 50. In week 51, the GP consultation rate is lower than noted during the same period in 2014/15 but higher than in 2013/14.

Rates remain below the pre-epidemic Northern Ireland 2015/16 threshold of 49.4 per 100,000 (Figures 1, 2 and 3).

**Figure 4. Sentinel GP age-specific consultation rates for flu/FLI from week 40, 2014**



**Comment**

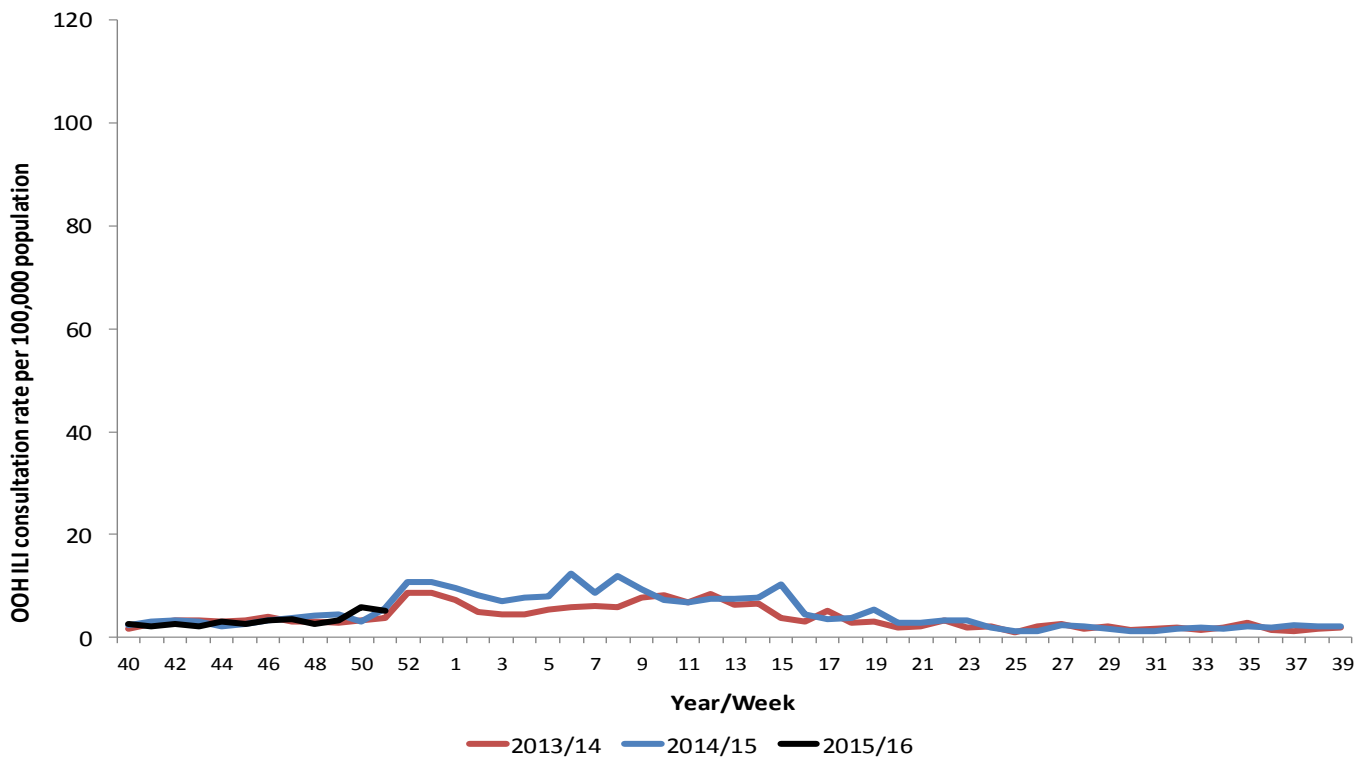
During week 51, GP consultations have decreased and remained relatively low in most age groups. Small numbers contributed to fluctuations in rates.

In week 51, consultation rates decreased among almost all age groups with the exception of those aged 45-64 years amongst whom a small increase was noted.

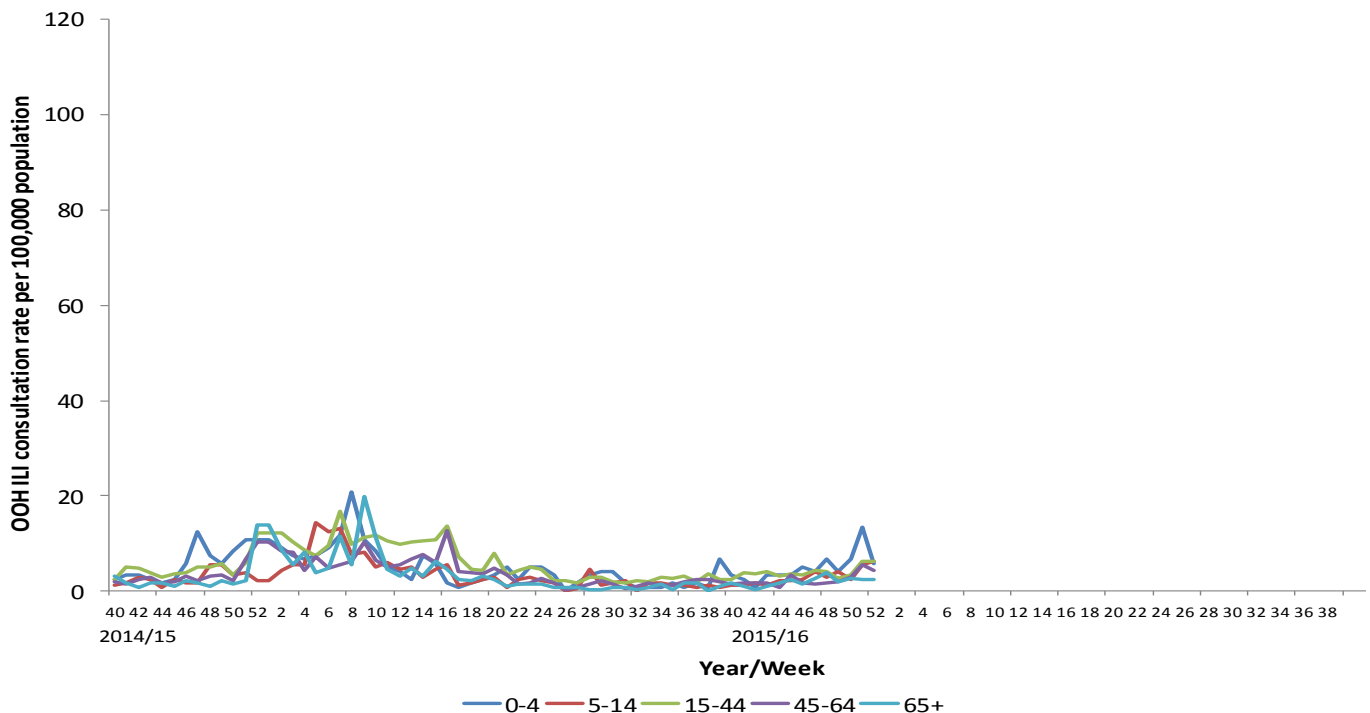
The highest consultation rate was noted in those aged 45-64 years at 25.6 per 100,000 population (Figure 4).

## Out-of-Hours (OOH) Centres Call Data

**Figure 5. OOH call rate for flu/FLI, 2013/14 – 2015/16**



**Figure 6. OOH Call rates of flu/FLI by age-group from week 40, 2014**



### Comment

During week 51, the OOH GP consultation rate for flu/FLI has slightly decreased and remained low at 5.2 per 100,000, compared to 5.8 per 100,000 in week 50. In week 51, the OOH GP consultation rate is the lower than noted during the same period in 2014/15 but higher than in 2013/14.

The proportion of calls related to flu in week 51, 2015 represents less than 1% of total calls to the OOH service.

OOH flu/FLI rates remained low in all age groups in week 51. Age specific-rates are also slightly lower than noted during the same period in 2014/15 but higher than in 2013/14. In week 51, rates increased in the 5-14 years age group, and decreased in the 0-4 and 45-64 years age groups. Age-specific rates remained stable among those aged 15-44 years, and 65 years and over. The highest OOH flu/FLI rate was noted jointly in those aged 5-14 and 15-44 years at 6.3 per 100,000 population (Figures 5 and 6).

## Virology Data

**Table 1. Virus activity in Northern Ireland, Week 51, 2015/16**

Source	Specimens Tested	Flu AH3	Flu A(H1N1) 2009	A (untyped)	Flu B	RSV	Total influenza Positive	% Influenza Positive
Sentinel	7	0	1	0	0	0	1	14%
Non-sentinel	116	0	8	5	0	30	13	11%
<b>Total</b>	<b>123</b>	<b>0</b>	<b>9</b>	<b>5</b>	<b>0</b>	<b>30</b>	<b>14</b>	<b>11%</b>

**Table 2. Cumulative virus activity in Northern Ireland, Week 40 - 51, 2015/16**

	Flu AH3	Flu A(H1N1) 2009	A (untyped)	Flu B	Total Influenza	RSV
0-4	0	4	0	2	6	304
5-14	0	1	1	0	2	12
15-64	0	10	7	0	17	36
65+	4	5	4	0	13	34
Unknown	0	0	0	0	0	0
<b>All ages</b>	<b>4</b>	<b>20</b>	<b>12</b>	<b>2</b>	<b>38</b>	<b>386</b>

**Table 3. Cumulative virus activity, Week 40 - Week 51, 2015/16**

	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	0	0	0	0	0	1	0	4	0	2	6	303
5-14	0	0	0	0	0	0	0	1	1	0	2	12
15-64	0	1	1	0	2	4	0	9	6	0	15	32
65+	0	0	1	0	1	0	4	5	3	0	12	34
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>All ages</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>4</b>	<b>19</b>	<b>10</b>	<b>2</b>	<b>35</b>	<b>381</b>

### Note

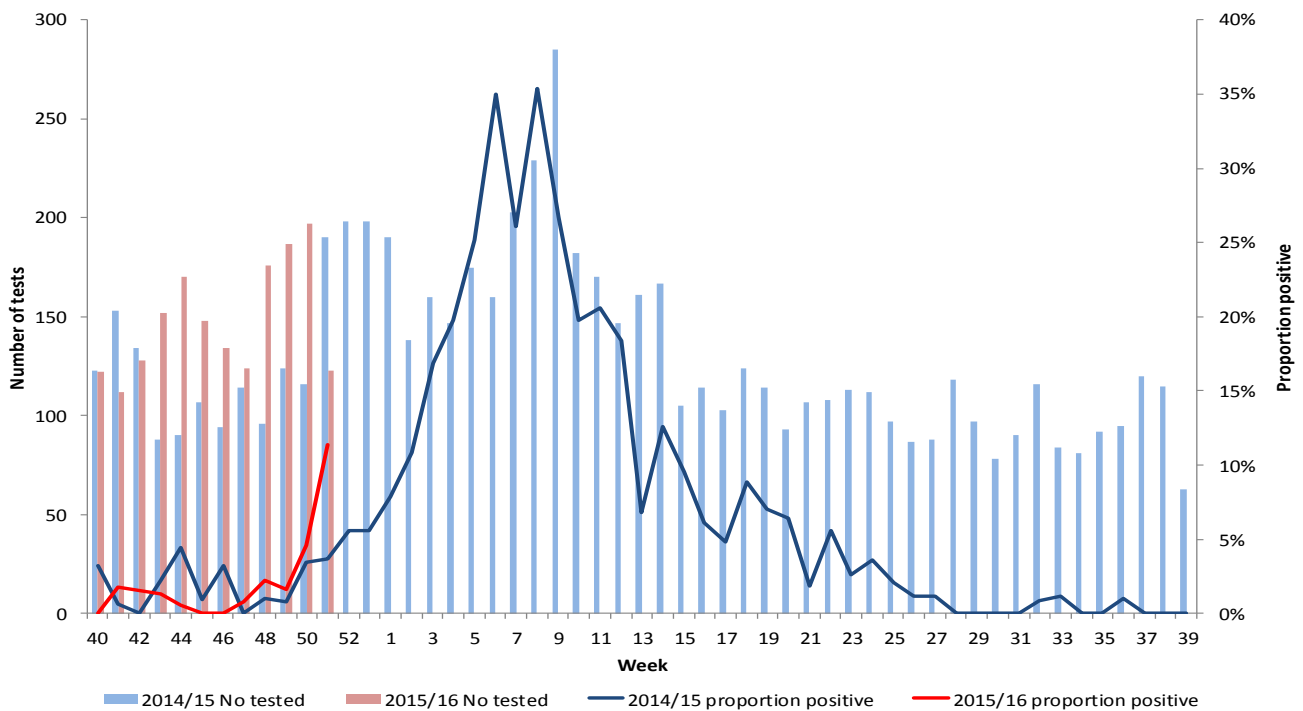
All virology data is provisional. The virology figures for previous weeks included in this or future bulletins are updated with data from laboratory returns received after the production of the last bulletin. The current bulletin reflects the most up-to-date information available. Sentinel and non-sentinel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

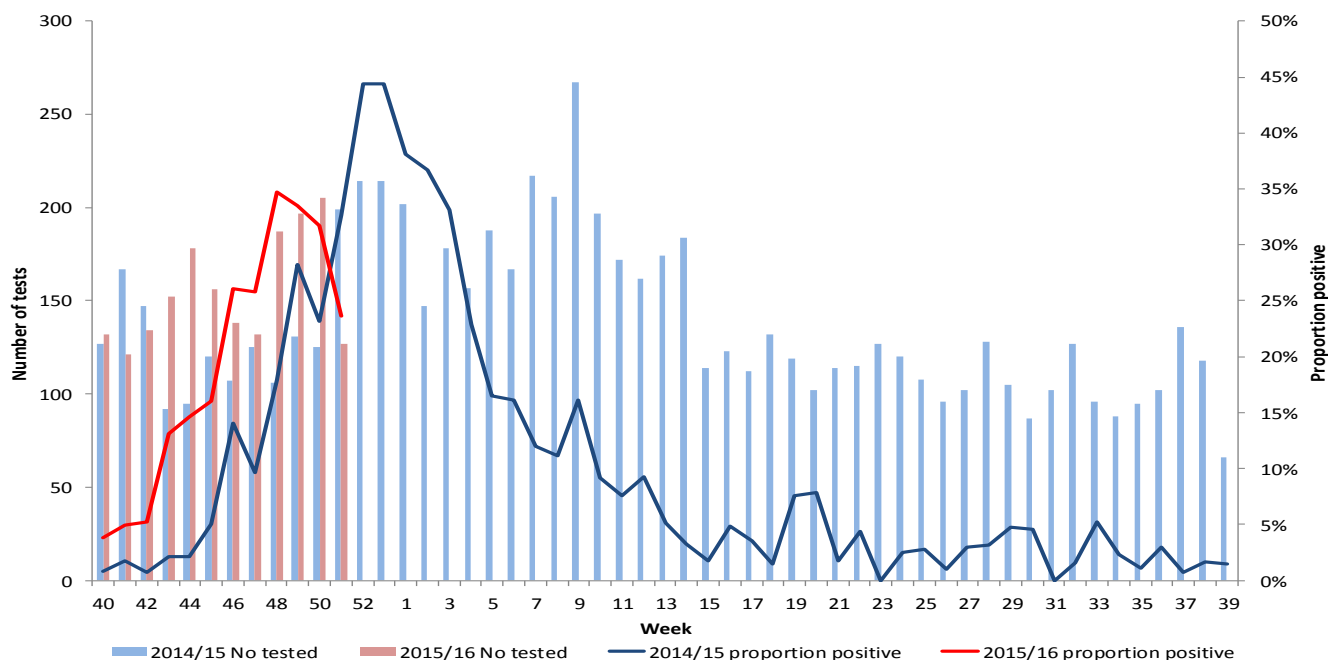
During week 51, 123 specimens were submitted for virological testing. There were 14 detections of influenza - 9 detections of influenza A(H1N1)pdm09 and 5 detections of influenza A (typing awaited). There have been a total of 38 detections of influenza reported this season. Positivity rates for influenza remain relatively low but have increased in week 51 to 11% compared with 5% in week 50 (Figure 7).

**Figure 7. Number of samples tested for influenza and proportion positive, 2014/15 and 2015/16, all sources**



## Respiratory Syncytial Virus

**Figure 8. Number of samples tested for RSV and proportion positive, 2014/15 and 2015/16, all sources**



### Comment

During week 51, there were 30 RSV positive detections. Positivity rates have further decreased from 32% in week 50 to 24% in week 51. RSV positivity rates are lower than detected during the same period last year. There have now been a total of 385 positive detections of RSV this season to date, of which the majority (79%) were from those aged 0-4 years (Figure 8 and table 2).

## Influenza Vaccine Uptake

To **31<sup>st</sup> October 2015**, provisional data suggested that vaccine uptake for those aged 65 years and over was 55.7%, lower than the same period in the 2014 (60.4%); while 40.5% of those under 65 and in an at risk group had received the vaccine, lower than in 2014 when 50.6% had received the vaccine during the same period.

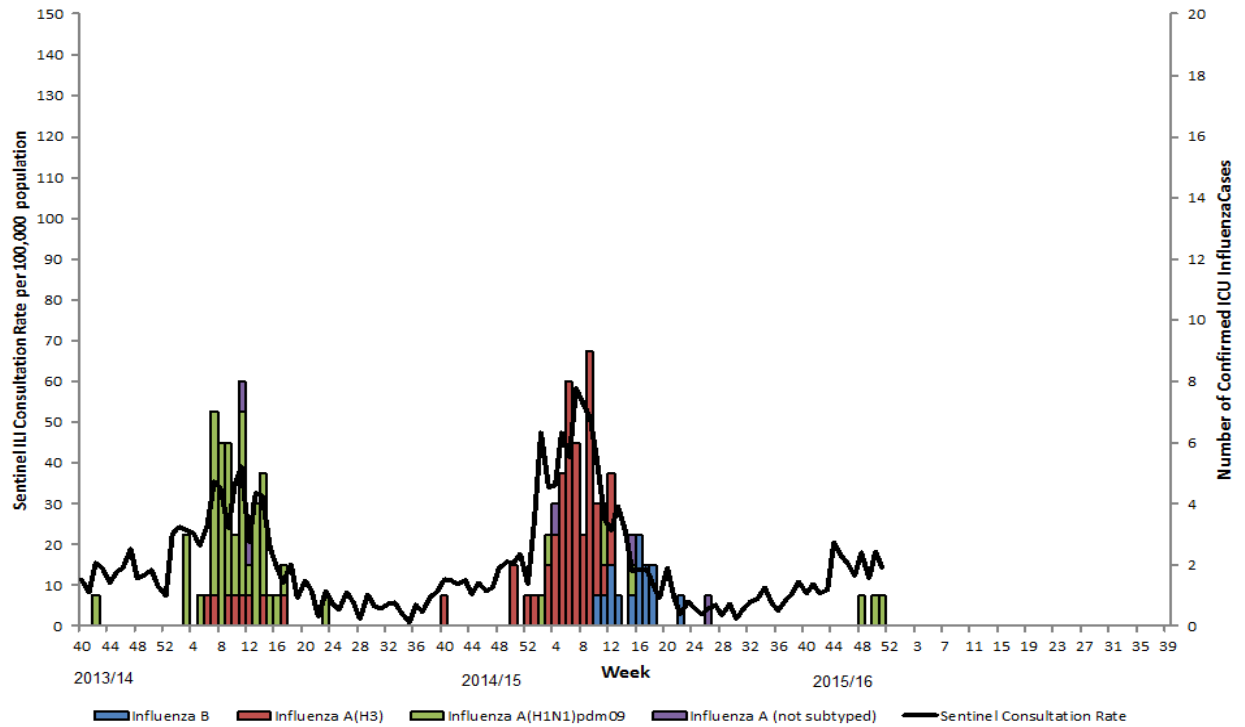
Similar to last season, all children aged between 2 and 4 years and all primary school children in 2014/15 have been offered the seasonal influenza vaccine. To **31<sup>st</sup> October 2015**, provisional data suggested that vaccine uptake among 2-4 year old children was 36.0%, lower than in 2014 when 41.4% had received the vaccine during the same period. Provisional data suggests uptake among children in primary school was 77.4%, also lower than in 2014 when 80.0% had received the vaccine during the same period.

Please note updated vaccination uptake figures will be available in the New Year.



## ICU/HDU Surveillance

**Figure 9. Confirmed ICU influenza cases by week of specimen, with sentinel ILI consultation rate, 2013/14 - 2015/16**



### Comment

Data are collected on laboratory confirmed influenza patients and deaths in critical care (level 2 and level 3).

During week 51, there was one admission to ICU confirmed with influenza A (H1N1)pdm09 and no deaths in the reported ICU patients.

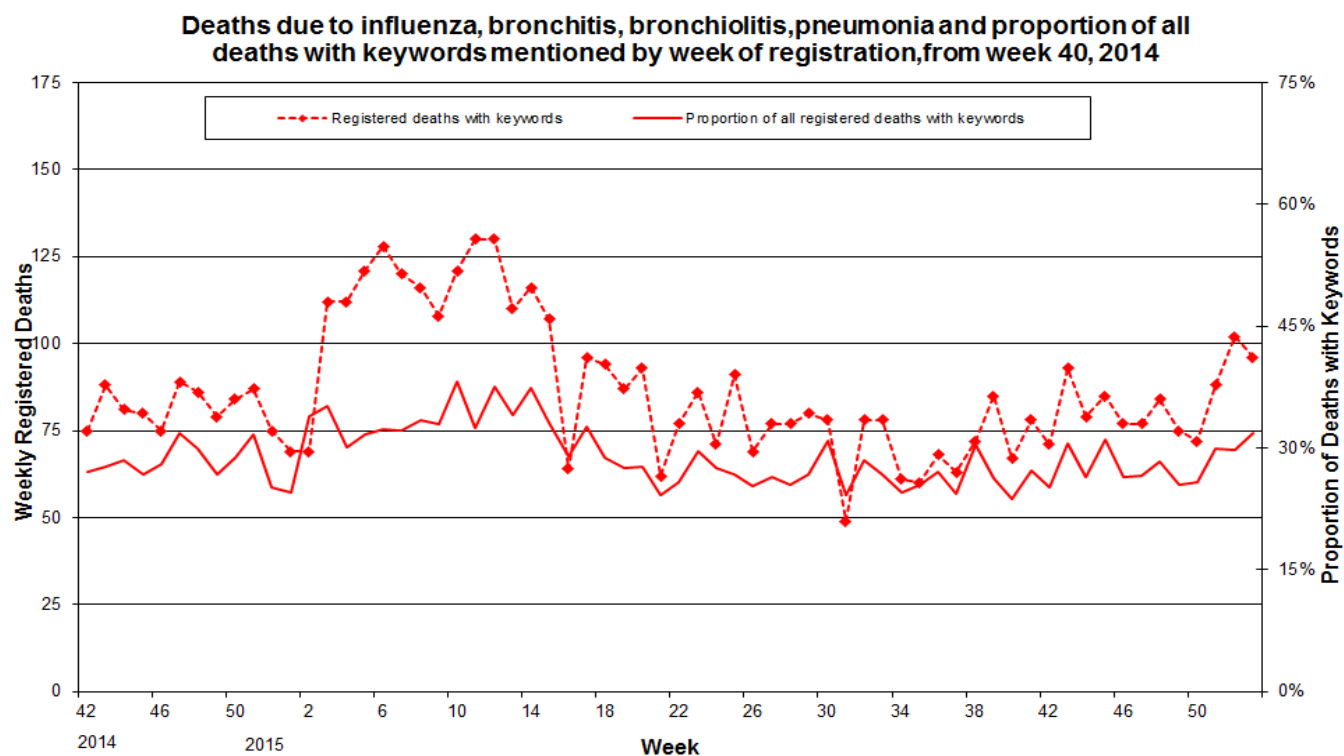
### Outbreak Surveillance

During week 51, there were no reports of confirmed influenza outbreaks.

## 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

During week 51, the proportion of registered deaths from specific respiratory infections increased to 32% from 30% in week 50.

In week 51, there were 301 registered deaths, of which 96 related to specific respiratory infections. The proportion of deaths attributed to specific respiratory infections is higher than the same period in both 2014/15 and 2013/14.

## EuroMOMO

During week 51, no excess all-cause mortality was reported in Northern Ireland.

## International Summary

### Europe

Week 50, 2015:

- Influenza activity is low in most countries in the WHO European Region, with the majority reporting no activity or sporadic influenza virus detections. The low proportion (5.9%) of sentinel specimens testing positive for influenza virus is in line with the low consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) observed in most countries in the region. Consultation rates for ILI were approaching the epidemic thresholds for the Netherlands and Denmark.
- Sporadic detections of A(H1N1)pdm09, A(H3N2) and type B influenza viruses were reported

Season:

- Influenza activity remains low, which is usual for this time of year.
- Although few viruses have been subtyped (type A) or ascribed to a lineage (type B), A(H1N1)pdm09 viruses were detected more frequently than A(H3N2), and B/Victoria lineage more frequently than B/Yamagata in both sentinel and non-sentinel specimens. All characterized viruses are similar to the strains included in vaccines for this season, although B/Victoria vaccine strains are only included in quadrivalent vaccines.

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

### Worldwide (WHO) and CDC

As at 14<sup>th</sup> December 2015:

Globally, influenza activity generally remained low in both hemispheres.

- In a few countries in Central Asia and Northern Europe, there were slight increases in influenza detections in recent weeks.
- In Eastern Asia, the rest of Europe, North Africa and North America, influenza activity continued at low, inter-seasonal levels.
- In western Asia, Oman reported increased influenza activity, predominantly due to influenza A(H1N1)pdm09 and influenza B viruses, while Bahrain reported a decline in influenza activity.
- Few influenza virus detections were reported by countries in tropical Africa.
- In tropical countries of the Americas, Central America and the Caribbean, respiratory virus activity remained at low levels, with the exception of Colombia, Costa Rica and Nicaragua.
- In tropical Asia, countries in Southern and South East Asia reported low influenza activity overall except Thailand where activity mainly due to B viruses continued to be reported. Iran reported elevated influenza activity, predominantly influenza A(H1N1)pdm09.
- In the temperate countries of the southern hemisphere, respiratory virus activity was generally low in recent weeks, with low levels of influenza A(H3N2) and B virus detections reported.
- National Influenza Centres (NICs) and other national influenza laboratories from 79 countries, areas or territories reported data to FluNet for the time period from 16 November 2015 to 29 November 2015\* (data as of 2015-12-10 13:22:14 UTC). The WHO GISRS laboratories tested more than 52160 specimens during that time period. 1615 were positive for influenza viruses, of which 1162 (72%) were typed as influenza A and 453

(28%) as influenza B. Of the sub-typed influenza A viruses, 408 (42.7%) were influenza A(H1N1)pdm09 and 548 (57.3%) were influenza A(H3N2). Of the characterized B viruses, 182 (74.9%) belonged to the B-Yamagata lineage and 61 (25.1%) 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/>

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](mailto:flusurveillance@hscni.net)

**This report was compiled by Chris Nugent, Dr Naomh Gallagher and Dr Jillian Johnston.**